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OUGHT CRANIOTOMY TO BE ABOLISHED?

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BY

JOSEPH GRIFFITHS SWAYNE, M.D.,

Consulting Physician Accoucheur to the Bristol General Hospital; Lecturer on Obstetric Medicine at the Bristol Medical School.

THE question whether craniotomy ought to be abolished has again come prominently to the front—chiefly in consequence of the brilliant successes which have recently been achieved in abdominal surgery. At the meeting of our Association in Brighton, last year, it was brought forward by Dr. Meadows, the president of the Obstetrical Section, and also by Dr. Barnes, who is, perhaps, the best authority in this country on operative midwifery; and it gave rise to much interesting discussion. But, in consequence of the restriction as to time, it was impossible for other speakers to give the full results of their experience in relation to this most important question. Since that time the subject has been again discussed, at a meeting of the Gynæcological Society in October last, and it gave rise to a long debate, which did not end, however, in any

very definite conclusion. The question is so momentous that it cannot be too fully discussed, and I therefore feel that I shall not be unnecessarily occupying time this evening if I give reasons, based on my own experience, for the conclusions which I have arrived at, after many years of obstetric practice. As regards the late discussion at the Gynæcological Society, it may be said that it was not so judicially calm or dispassionate as that which took place at Brighton. Gynæcology, as might be expected, was much more strongly represented than obstetrics on that occasion. Now, gynæcological surgeons look at these matters from quite a different standpoint to that occupied by experienced accoucheurs. Never, perhaps, having been placed in the same position themselves, they have little sympathy with their obstetrical brethren, whose sole desire, I feel confident, is to do the best for their patients under more painful and trying circumstances than any which can fall to the lot of a surgeon. I cannot otherwise account for the following remark which fell from the lips of the president, Mr. Lawson Tait: "He was perfectly certain, from what he saw in publications, and from what he heard from the lips of men in practice, that a perfectly unjustifiable amount of child murder by craniotomy was practised." Such an expression as this may, perhaps, have been applicable to some of the ignorant "men-midwives" of former centuries; but I am confident that it is utterly undeserved by ninety-nine out of every hundred accoucheurs of the present day. It is an abuse of language to apply the term "murder" to such an operation in the hands of any conscientious practitioner: for "murder" implies *malice prepense*—a bad motive, and a deliberate intention to carry it out; both of which conditions are wanting.

There appears to be a sort of theory abroad, that a man undertakes craniotomy in a deliberate, cold-blooded manner, after reasoning with himself thus: "I know that in this case a child cannot be born alive *per vias naturales*, and that I have two alternatives before me: Am I to kill the child, to save the mother? or save the child by an operation so dangerous that it will most probably kill the mother?" And, on the principle that the mother's life is more valuable than the child's, he at once chooses the first alternative. But any one who has had much experience of craniotomy, as I unfortunately have, knows that this is quite a false view to take of the situation. In nine cases out of ten, the state of things is this: the patient has a slightly malformed pelvis, the conjugate diameter being between three and four inches, so that she is capable of having a living child under favourable circumstances: probably she is a primipara, so that the attendant is not aware of the condition of the pelvis until called in to attend her: or she is a pluripara who has given birth to one or two children that happened to be below the average size; but on this occasion the child is larger than usual, or there is an unfavourable presentation, such as the forehead to the pubis, or a brow or face, which the attendant tries in vain to alter. The head is arrested for hours in the upper strait of the pelvis, and the woman is becoming exhausted. The attendant then tries to deliver by the long forceps, or by turning, and fails. He therefore sends for further advice and help, and another practitioner is called in. After consultation, they decide that, as the woman's condition is not yet critical, they may wait longer before having recourse to extreme measures; and then, after a time, the consultant tries his hand also at the long forceps, or turning, and fails to deliver. The condition

of the woman is now becoming desperate: symptoms of powerless labour have set in; the pulse is 120 between the pains, and the temperature 102° or 103°; the woman is very restless, excited, and slightly delirious; the child, if not dead already from the long-continued pressure on the head, is hovering between life and death. No time is to be lost, and nothing now remains but the dreadful alternative of craniotomy. It sacrifices the child; but it, by lessening the size of the child's head, brings quick relief to the mother.

Now, what man in his senses would, under these circumstances, perform the Cæsarean section? It is a fact universally recognised that, to give it a fair chance of success, the Cæsarean operation should be one of election, and not a *dernier ressort:* hence it is that the operation has been more successful on the Continent than in Great Britain. But in such a case as I have given above, when the soft parts have been bruised and compressed by attempts to deliver with the forceps, when there is commencing inflammation in the neck of the uterus and vagina, and when the general condition is so bad, any man who would inflict on a patient the additional shock of the Cæsarean section for the doubtful chance of saving a child would be guilty of something very like woman "murder." As an instance of a case of this kind, I will give the particulars of one which occurred to myself some years ago:

On June 30th, 1872, I received a telegram to ask me to go to Monmouth to see a lady in her first confinement. She was over thirty, and had a rather narrow pelvis. She had been in labour since June 26th, four days before, when the membranes ruptured. Mr. Norman and Mr. Wilson, of Monmouth, were in attendance. Mr. Wilson

had been called in on the day before my visit, and, finding the head immovable at the brim of the pelvis, attempted to deliver with the long forceps, but without success. Mr. Norman had previously made an unsuccessful attempt to turn. I arrived about 2 p.m., June 30th. On examining, I found the head partly in the cavity of the pelvis, the scalp very puffy, and the bones overlapping a good deal. The ear could be felt, a little to the left of the pubis. The patient was rather restless and excitable. Her pulse was over 120 between the pains. She had, however, taken several full doses of opium, and inhaled a good deal of chloroform. As we all agreed that she should be delivered without delay, I applied the forceps without much difficulty. After endeavouring to extract for about two hours, in concert with the pains which were very ineffectual, I found scarcely any alteration in the position of the head. As her condition was now precarious, we all agreed, after a consultation, that craniotomy should be performed. This was accordingly done by me without much difficulty, and I extracted a large male child. The placenta was retained by hour-glass contraction of the uterus and adhesions, and I had to introduce my hand and detach it. There was some accompanying hæmorrhage. Soon after the placenta was removed the patient appeared to be in a state of great collapse; her pulse was over 130, and could scarcely be counted; her breathing was rather stertorous, and her jaw dropped. Mr. Wilson, however, was disposed to attribute this very much to the after-effects of the great quantity of chloroform and opium she had taken. But she soon rallied under stimuli, and before I left Monmouth that evening was much better. I heard afterwards that for some days she appeared likely to do well; but that

about a fortnight after delivery she had severe rigors, followed by symptoms of septicæmia and pleurisy, which terminated fatally about three weeks after delivery. No one can doubt that this result was caused by the protracted labour, which lasted over five days; by the unsuccessful attempts to deliver, and by the *post-partum* hæmorrhage; but not by the craniotomy, which was neither a difficult nor a long operation. I have no manner of doubt, myself, that if the Cæsarean operation had been performed, she would have died at once from the shock.

The cases in which one has the deliberate choice, early in the labour, between craniotomy and the Cæsarean section are, according to my experience, very few and far between. It is comparatively rare to find the pelvis so much distorted that the conjugate diameter is under three inches, so that one knows at once after an examination that a living child cannot pass. The following case, however, was one of this kind:

I was sent for on Sunday, March 9th, 1856, to see a woman living in Wilder Street, who was being attended by Mr. Biggs, one of my pupils at the Bristol Medical School. When I arrived she informed me that she was confined at Birmingham with her first child sixteen months ago; that she had a very bad time; that seven doctors were in attendance, and that the child was destroyed. Mr. Biggs saw her first at half-past six the evening before: the os uteri was then but little dilated, and he could make out no presentation. At twelve the membranes ruptured, the pains became very strong: the cord then prolapsed, and he attempted to reduce it, but without success. The pains then abated in force and frequency until I saw her, about half-past four p.m.

At that time she seemed somewhat exhausted; her pulse was 130, and her pains were neither frequent nor strong. On examining, the first thing I felt was the upper part of the sacrum, which was exceedingly prominent, and also a large loop of umbilical cord quite destitute of pulsation. This was a great relief to my mind; for I then knew that there was no necessity for the Cæsarean operation. The os uteri was soft and dilatable, and somewhat œdematous and irregular in shape. The head was high above the pubis, and could only be reached with some difficulty by the forefinger of the left hand. On examining the brim of the pelvis carefully, I found that it was of an hour-glass shape, the right side being much more capacious than the left. The conjugate diameter was very narrow—in fact, not amounting to much more than two inches; for I could but just introduce the tips of the three first fingers when placed in a line between the sacrum and pubis. As the child was dead and there was nothing to be gained by further delay, I at once proceeded to perforate the head. I had some difficulty in doing this, owing to the anterior situation of the head above the pubis. After evacuating nearly all the brain, I succeeded in introducing the craniotomy forceps, and bringing away the greater portion of the skull piece by piece. The head was then drawn down into the right side of the pelvic cavity, sufficiently far for me to reach the petrous portion of the temporal bone, and to obtain a firm hold upon this part with the crotchet. Whilst thus extracting, the base of the skull suddenly came through the narrow pelvic brim with a jerk, and the rest of the delivery was accomplished without much trouble. Some hour-glass contraction of the uterus rendered it necessary to in-

troduce the hand for the removal of the placenta. M. xxx. of laudanum, and the same quantity of sal-volatile, were given. The woman recovered without a bad symptom, although it took me four hours of hard work to deliver her. Had the child been alive, this case would undoubtedly have been a proper one for the Cæsarean section. Owing to the amount of pelvic deformity, craniotomy was rendered unusually difficult, and therefore proportionally dangerous; but yet undoubtedly safer than the Cæsarean section under the most favourable circumstances. The saving of the child's life, however, ought, under other circumstances, to have settled the matter in favour of laparotomy.

I will now briefly mention another case, in which I had not the slightest hesitation in deciding at once in favour of the Cæsarean section. In 1862 Mr. Grace, of Kingswood, brought a primipara with deformed pelvis to the Bristol General Hospital. She was a dwarf only four feet in height, and I found on measuring the pelvis that the conjugate diameter was about one inch and four-fifths in length. As the labour was just commencing, I at once decided upon not attempting delivery by craniotomy, and advised the Cæsarean section. After consulting with my colleagues, who all agreed with me, the operation was performed without delay by Mr. Coe, the senior surgeon. It was carefully and skilfully done; but the woman died within forty-eight hours. The child was saved, and is, I believe, now living. At the *post-mortem* examination, we found that the fatal result was, in all probability, due to the wide gaping wound in the uterus. But this happened before the days of antiseptic surgery, uterine sutures, or drainage tubes. The case is published in the *Obstetrical Transactions* for 1864.

The two cases just related are, however, exceptional cases: in nine cases out of ten in which craniotomy is performed, the pelvic deformity is not so great, the conjugate diameter being between three and four inches, and therefore the accoucheur has very good reason to hope that he will be able to deliver a living child by the long forceps or by turning. Indeed, he would be very blameworthy if he at once performed laparotomy without trying these methods. Accordingly he tries them, and after him others try them, but without success. In the meantime the condition of the woman goes on from bad to worse, and he is at last reduced to the hateful necessity of craniotomy. By this he sacrifices the child, but nearly always saves the mother; whereas the Cæsarean section at such a crisis would almost inevitably have killed the woman, and would, very probably, not have saved the child. Of course in all such cases it is the duty of the practitioner to induce premature labour, should he be engaged to attend the patient in a subsequent confinement.

In reading the account of the discussion which took place at the Gynæcological Society, I could not help being struck with the very exaggerated idea which seemed to prevail in the minds of many members present as to the dangers of craniotomy as an operation. Dr. Meadows, who led the discussion, is very sanguine about the success of a new method of performing the Cæsarean section, which has been introduced by Sänger of Leipzig. This method consists in stripping back the peritoneum from the edges of the uterine incision, and slicing away a portion of the muscular tissue, so that the cut edges of the peritoneum can be brought very exactly in apposition by a number of superficial sutures, in addition to the deep ones already inserted.

This method has not yet had a sufficient trial to give very reliable statistics; but, as far as it goes at present, it gives a maternal mortality of a little over 21 per cent., and a fœtal mortality of about seven. This small maternal mortality, Dr. Meadows says, shows the operation to be "little, if at all, more dangerous than craniotomy." This is a conclusion, however, from which I must entirely dissent. I have, unfortunately, as I said before, had a large experience of craniotomy, not amongst my own patients, but amongst those of others who have called me in in consultation. This will readily be understood when I mention that from 1850 to 1875 I had almost a monopoly of the consulting midwifery in this district, and consequently saw some of the worst cases which can happen. I cannot recall a single instance in which death could fairly be attributed to the operation. In those which terminated fatally, the result was due to the following causes: (1) Protracted labour. The case was attended by an ignorant midwife, who left the patient so long in labour before sending that she was almost moribund, and the infant had been dead for some hours when I arrived. The length of the labour was, no doubt, the cause of death in the Monmouth case I have above related. (2) Convulsions occurring during pregnancy. Turning was resorted to as a last resource; but the head was arrested by a narrow pelvic brim, and had to be opened. (3) Hæmorrhage from placenta prævia. Craniotomy was performed for a similar reason to that mentioned in the last case. (4) Exhaustion arising from semi-starvation, owing to long-continued vomiting for some weeks before delivery. The breech presented, but craniotomy was necessary, because the head could not be drawn through the brim of a deformed pelvis. In none of these

cases was the operation particularly tedious or difficult. I therefore am led by experience to agree thoroughly with the following very sensible and judicious remarks made by Dr. Barnes, in the course of the discussion on craniotomy: "The problem would be nearer solution could we bring the Cæsarean section in some form to such perfection that the mortality attending it would be reduced to the mortality attending craniotomy. And here he disputed the validity of the statistics cited by Dr. Meadows. Dr. Meadows puts the mortality of the Cæsarean section, according to Sänger's method, at 20 per cent. Admitting this for the purpose of argument, and admitting further that the operation might be so improved as to attain an even smaller mortality, he would still most emphatically protest against the statement that the necessary mortality attending craniotomy approached 20 per cent., or even 5 per cent., excluding the cases of extreme pelvic contraction, which forbade the hope of extracting the child after craniotomy, and which all acknowledged should be treated by the Cæsarean section. Craniotomy done under fair conditions, such as are postulated for the Cæsarean section—that is, done at a chosen time with due skill—does not involve any maternal mortality."

With this last remark I thoroughly agree, and I will now proceed to answer, as well as I can, the oft-repeated question, "Ought craniotomy to be abolished?" To this I reply, Certainly not, if the child be undoubtedly dead, and there is marked disproportion between the size of the head and the capacity of the pelvis. In such cases craniotomy should always be preferred to delivery by the forceps: it is not more difficult to perform (except in those extreme cases of distortion where the Cæsarean

section should be preferred), and it is much more scientific; for, by reducing the size of the child's head, it at once removes the disproportion which is the obstacle to delivery, and relieves the soft parts lining the pelvis from undue pressure. I cannot therefore agree with Dr. Meadows "that the perforator should be laid aside as an instrument of a bygone day," or that the operation *per se* is worthy to be called "an abominable, unscientific, and brutal proceeding." It is only when the child is alive that such opprobrious epithets are in any way applicable to it.

It is a remarkable circumstance that in the majority of cases in which I have had to deliver by craniotomy, I had certain proofs of the death of the child before operating. In some the cord was prolapsed and pulseless, thus showing how frequently a deformed, irregularly-shaped pelvis predisposes to this accident. In others the breech or feet presented, or the child had been turned, and the head was arrested in the narrow pelvic brim, until it caused death by pressure on the cord; in others the child was putrid, and in others the operation had been partially completed before I arrived. In others I had no such certain proofs of the death of the infant; but there were no fœtal heart-sounds to be discovered.

It is a pity that this question, which has been so much debated of late, has not been expressed in other and more precise terms. It may reasonably be asked whether it ought to include every kind of embryotomy, such as evisceration or decapitation in arm presentations, when turning is impossible, or even tapping a hydrocephalic head—a proceeding not necessarily but usually fatal; for when the contained water is evacuated, the skull collapses under pressure, and the somewhat

diffluent brain usually breaks up and comes away with the fluid.

What we all really wish to abolish is, any operation during labour which destroys the life of the child. The real question, I think, ought to be, not "Ought crainotomy to be abolished?" but, "Ought fœticide during labour to be abolished?" The law holds that there is such a thing as "justifiable homicide." Is there such a thing as "justifiable fœticide"? I believe that, under certain circumstances, there is; but it is a horrible alternative, involving an awful responsibility, such as no man should face single-handed, if possible. Could we do away with this, it would be a "consummation most devoutly to be wished!"

I fear however that, in the present state of obstetric science, there is not much chance of this. But yet we have many signs of encouragement, when we look back to the prevalent state of things forty or fifty years ago. When I began midwifery practice, craniotomy was much more common than it is now, owing to the much less frequent use of the forceps. Obstetric practitioners seemed to have a dread of the long forceps: they considered it a dangerous instrument, and confined themselves almost entirely to the short forceps. If the head remained so high that the ear could not be felt, or if the os uteri were not fully dilated, they were shy of making any attempt with the forceps, and too frequently resorted at once to craniotomy. As Dr. Routh remarked in the course of the discussion: "When we read that so eminent an obstetrician as Dr. Robert Lee had 137 perforations to 55 forceps cases, it was manifest times had greatly changed now for the better." This change has been mainly due to the late Drs. Radford and Tyler Smith,

who were amongst the first to awaken the consciences of their medical brethren, by writing against this opprobrium of British midwifery; to Sir James Simpson, who improved the long forceps, and re-introduced the practice of turning as an alternative for the use of this instrument; to Dr. Barnes, who increased the length and improved the shape of the long forceps; and also to Professor Tarnier, of Paris, who invented the traction forceps, thus adding considerably to the tractive power of the instrument. Partly owing to these improvements, and partly owing to the awakened conscience of the profession, the sacrifice of the life of the child, to save that of the mother, is not a thing of common occurrence in the present day; but yet the idea that such an operation as craniotomy can be altogether done away with is at present too Utopian to be entertained, because we do not yet possess a sufficiently safe operation to substitute for it.

To answer the question, "Ought craniotomy to be abolished?" fully and finally, we ought to regard it in its relations to the three degrees of pelvic deformity which are given in all obstetric works. Firstly, in those cases in which the conjugate diameter is between three and four inches, where it is possible to deliver a living child by the forceps. In this class of cases craniotomy should not be abolished. If the child be dead, it is then to be preferred to the forceps. If it be alive, it is the only safe *dernier ressort* after the forceps or turning have been tried and have failed. Secondly, in those cases in which the conjugate diameter is between two and three inches, rendering it impossible to deliver alive a child of ordinary size at the full term. In cases of this kind, undoubtedly, craniotomy ought to be abolished. The child's life ought to

be saved by laparotomy, at the least possible risk to the mother. To insure this, the Cæsarean section ought to be an operation of election, and not a last resource. It should be done at the beginning of the labour, and under the most favourable conditions. For instance, the strictest antiseptic precautions must be adopted; and in the case of the very poor, the woman should be removed, if possible, from her ordinary surroundings into some well-regulated lying-in hospital. As Dr. Routh very justly remarked in the course of the discussion at the Gynæcological Society: "In a hospital with all the necessary appliances, surgical and antiseptic, and with qualified assistants and an accustomed operator, the case was very different from what occurred in some of the slums of a town. In an ill-ventilated room, dirty, the sleeping, eating, dying room, especially if small, what were the chances of success either to mother or child? We should never forget that if abdominal surgery was more successful now than formerly, it was wholly owing to the system of cleanliness and antiseptics employed. When a man was suddenly called to an urgent case at night in one of these slums, surely craniotomy offered the best chance to the mother." Cases of this kind are pre-eminently suited for the induction of premature labour: if the accoucheur has the good fortune to see his patient, and make a careful examination of her pelvis a few months before delivery, he may thus avoid the dreadful responsibility of having to choose between craniotomy and the Cæsarean section. Thirdly and lastly, craniotomy ought to be abolished in those cases where the conjugate diameter is under two inches. It is true that even in such cases it is sometimes possible to deliver a mutilated child by the cephalotribe, or even by crani-

otomy; but the operation is so difficult and dangerous to the mother, if it succeeds, that the risk she would incur would be almost, if not quite, as great as that of the Cæsarean section; and if it fails, the Cæsarean section would have to be done under the most unfavourable conditions. There should be no hesitation, then, in at once adopting the latter operation, and thus saving, if possible, the lives of both mother and child.

ON GRAVES'S DISEASE, WITH A CASE.

Read before the Bristol Medico-Chirurgical Society

BY

J. MICHELL CLARKE, M.A., M.B. CANTAB.,

Assistant Physician Bristol General Hospital; Demonstrator of Physiology at the Bristol Medical School.

THE case that I am about to report is that of a girl, aged 18, who was born and always lived at Chepstow. The family history was good, the two preceding generations being long lived. She was one of a family of fifteen, and had four sisters and three brothers alive and well; seven brothers died in infancy—four of scarlet fever, one from hip disease.

She had always been perfectly healthy; had had no serious illness. Menstruated at 14; always regular. In 1885 she had headaches occasionally, with slight feeling of fulness at the throat, but was otherwise in her usual good health. In June, 1886, she experienced during a menstrual period violent palpitation of the heart, severe frontal headache, pain in the præcordial region, with nausea and vomiting in the morning. The next period was regular, and without any abnormal symptoms; but since then she has seen nothing. She remained well until August 4th, when the palpitation returned—though not so severely as in June,—her eyes appeared to be growing larger, her throat commenced to swell and throb, her voice became more and more nasal in character, there was slight cough, and she rapidly lost flesh. She was quite unable

to suggest any cause for her illness, and had sustained no fright or shock of any kind.

On admission on August 18th, 1886, the patient was a thin, slight girl, decidedly anæmic, but with a bright flush on each cheek. She complained of great weakness, and was very excitable, bursting out crying when spoken to. Slight choreiform movements were noticed in the limbs. There was marked exophthalmos, and Von Graefe's lid-symptom was present. The lateral lobes of the thyroid showed great symmetrical enlargement, the vessels over the swelling were dilated, there was visible pulsation in the jugular veins, a thrill could be felt over the tumour, and a loud venous hum was heard.

The neck measured 14½ inches at the greatest circumference. On examination of the chest, the breath-sounds were harsh. There was some pulsation to the right of the sternum and over the cardiac area. The apex-beat was in the left fourth space, with a forcible impulse. First sound at apex short and weak, second at base loud and full; a blowing murmur was heard at the base, loudest over the pulmonary artery, and faintly audible at the apex. The liver-dulness was normal, and nothing was detected in the abdomen. The teeth were carious. Pulse 120, weak, frequent, fairly regular, of low tension. Temperature normal. Urine acid, 1020, no albumen or sugar.

She was ordered ♏ v. of liq. arsenicalis ter die, and a few days afterwards this was increased to ♏ x.

Until September 1st the patient appeared to improve; she slept well, took her food well, and expressed herself as feeling comfortable. But after that date she became rapidly worse, was very sick in the mornings, lost flesh very fast, and was too weak to stand. The arsenic was discontinued on the first appearance of the bad symp-

toms, and the treatment during the rest of her illness was merely palliative.

Omitting details, on September 10th it was noted that the emaciation had become extreme; there was diarrhœa, but the sickness had stopped; there were sordes on the lips and teeth, bleeding of the gums, and the hair began to fall out rapidly. Pulse 176, small, weak; respiration 36; temperature normal. She still slept well.

Uncontrollable vomiting set in again on the 13th, and at noon of the 14th she lay in a semi-comatose state; there was violent pulsation in the neck and over the heart, and the pulse could not be counted, from its extreme rapidity. Respiration 60. She died a few hours later.

Autopsy, fourteen hours after death.—Rigor mortis absent; emaciation extreme; the exophthalmos had disappeared. There was great enlargement of the isthmus and lateral lobes of the thyroid, which latter extended from the root of the neck on each side upwards to some way under the ramus of the jaw; its tissue was firm, but very vascular. The trachea was compressed laterally between the two hypertrophied lobes of the thyroid; its transverse diameter was one-third of an inch, but its calibre was not diminished.

The neck measured 11½ inches at the greatest circumference. There was a small quantity of fluid in the right pleura, and some recent adhesions over the surface of the right lung; the bases of the lungs were œdematous. Pericardium normal. The heart was small, and there was, relatively to its size, some hypertrophy of left ventricle. The valves, endocardium, and substance of walls, were healthy. The thymus was large and persistent, but had the normal appearance; it measured four inches in length and half an inch in thickness. Liver healthy, but

weighed only 28 ounces. Pancreas healthy, but extremely small, being four inches long by 1½ inch broad and half an inch thick. Spleen, kidneys, brain, appeared healthy; the latter weighed 45 ounces.

Sections from the pons Varolii, medulla oblongata, highest part of cervical cord, liver, kidneys, pancreas, and thymus, were examined microscopically, and found healthy. Sections from the cervical and first thoracic ganglia of the sympathetic were quite normal, after careful examination as to the state of ganglion cells, nerve fibres, pigmentation, and amount of connective tissue. Sections from the trunk of the vagus appeared healthy under the microscope.

As to the thyroid, it contained a very large number of vessels, I should say, in excess of the normal; the quantity of connective tissue was less than usual, the striking feature about the gland being the very large amount of the epithelial elements in relation to the connective tissue. The individual cells were very distinct. Besides acini of the regular round or oval form, there were large numbers of irregularly-shaped vesicles—doubtless from compression during rapid growth—many of which were elongated and very large. Evidence of rapid proliferation and decay of cells was everywhere present; and in some places—as a sign of their unstable condition—the cells reverted to the columnar instead of the glandular spheroidal type, showing a tendency to return to their original embryological form. Another point was the small extent of the normal colloid degeneration of vesicles present, which would seem to show that the metabolism of the gland had been profoundly altered.

The foregoing appears to be an unique case in medical literature—at least, I can find no report of a similar one—

from the fact that the disease ran an "acute" course; indeed, the patient appeared to waste away under our eyes from day to day.

The patient and her mother were rigidly questioned as to the onset of the disease, and they both positively stated that the illness began only fourteen days before admission; so that—with the exception of the transient attack of palpitation, six weeks previously—the whole duration of the illness was one day less than six weeks.

The other points of interest are, chiefly: the large persistent thymus, two instances of which in patients suffering from exophthalmic goître are recorded by Hilton Fagge; the small size of the liver and pancreas; the very large thyroid; the disappearance of the exophthalmos after death, which perhaps favours the hypothesis that it is due to dilatation of vessels in the orbit, and at any rate is opposed to the theory that it depends on masses of fat in this situation; and the absence of any lesion in the nervous system.

According to our present knowledge, the symptoms included under the term Graves's disease, or exophthalmic goître, vary widely in different cases. The cardinal features of the disease are, palpitation, pulsating bronchocele, exophthalmos, anæmia, and emaciation: all observers agree in stating that in the vast majority of cases palpitation is the first symptom to appear. The ordinary course of the disease is, briefly, the appearance of palpitation, often after a fright, followed at an interval by exophthalmos, and then by a pulsating enlargement of the thyroid, with a peculiar anæmia not relieved by iron, and more or less emaciation. These symptoms, which often seem to be affected by the menstrual periods, generally persist for some years, and the patient probably

either recovers, though there is no direct evidence of complete recovery, or more often falls a victim to cardiac failure, to some intercurrent disorder, generally of the lungs, or rarely to suffocation from pressure on the trachea.

*As an instance of recovery to a considerable degree from the disease, I may mention the case of a lady in whom the disease came on in 1871, after a fright experienced during the siege of Paris. All the symptoms mentioned above were present at the outset. The three first were especially intense, and they persisted in their entirety until 1879, when she gradually began to lose both the exophthalmos and the goître, and gained flesh. At the present time she suffers from severe palpitation, anæmia, and from a certain amount of emaciation. She also, after any sudden or too great exertion, is liable to attacks of aggravated palpitation with cardiac syncope; and during these attacks, and for a few days after, the exophthalmos returns, and the thyroid enlarges and pulsates—neither to any very great extent, but sufficiently to become prominent symptoms. So that this case shows that the exophthalmos and the goître may disappear after a time, leaving palpitation, anæmia, and emaciation, and under certain circumstances may reappear for short periods.

In other cases, without the general condition of the patient changing for the worse, exophthalmos and pulsating goître may appear and disappear at different times during the course of the disease, being often intensified at the menstrual periods; and in still other patients either of these two symptoms may be absent, one only appearing in conjunction with anæmia, palpitation, and emaciation.

* NOTE.—Since this patient was under my father's care from 1873 onwards, I have been able to obtain accurate accounts of her illness.

I have also under observation some cases which correspond exactly to Graves's disease in having the characteristic palpitation, anæmia, and emaciation, with the minor symptoms generally complained of, but in whom neither exophthalmos nor goître has ever been present, or only in a very slight and transient degree in the earliest stages of the disease.

These considerations would seem to indicate that exophthalmos and pulsating goître, the prominent clinical features in most cases of Graves's disease, are the least constant if we take the whole number of cases, and that the patient may lose them while retaining the other three chief symptoms; and if in some patients either the exophthalmos or the goître may be absent, and in some both may disappear, it is certainly open to us to argue that in others they may be absent from the beginning.

Again: the frequent absence of one or other of these symptoms, or, as mentioned above, their occasional appearance and disappearance during the course of the disease in varying conditions of the patient, would tend to show that they were not due to a coarse pathological lesion; that even if a lesion were present that satisfactorily explained these two symptoms, it could not be brought forward as an explanation of the more constant features of the disease; and that exophthalmos and pulsating goître presumably depend on a so-called neurosis, or rather on some disturbance in the molecular processes of assimilation and nutrition. Also, since the palpitation occurs in some patients without goître or exophthalmos, it obviously arises either from a different source than the latter arise from, or from one cause acting through different mechanisms; so that, on the

hypothesis of a coarse lesion being present, we should require two distinct lesions at least to produce these three symptoms.

Now, the attempts to assign a cause to Graves's disease have been founded for the most part on the assumption that if the exophthalmos, goître, and palpitation were accounted for, the other symptoms would follow; and since in a few cases lesions of the ganglia of the cervical sympathetic have been found, these have been considered by many to be the cause of the disease. The palpitation has been explained by the fact that it may be produced by irritation of the accelerator nerves to the heart, which pass through the third cervical ganglia; and since the vaso-motor fibres from the cervical cord to the thyroid and eyeball also pass through it, destruction of the third ganglia has been thought to produce palpitation by irritation of the first set of fibres, and exophthalmos and goître by paralysis (vaso-constrictor) of the second, causing dilatation of vessels.

Against this may be urged the difficulty of conceiving that one and the same lesion could cause paralysis of one set of fibres and irritation of another set, whilst an irritation lasting for such long periods is unknown in pathology, independently of the fact that the other recognised symptoms of paralysis of the cervical sympathetic are absent.

The lesions described are not altogether of a very satisfactory nature, and it has been objected to them that they might readily have been produced during the processes of preparation for section cutting. They are, increase of connective tissue, changes in the ganglion cells —chiefly pigmentation, opacity of their protoplasm, and shrinking of the cells from their capsules. In a large

number of sympathetics that I examined the amounts of pigmentation and connective tissue varied greatly, and the ganglion cells did not always accurately fill their capsules, and appeared somewhat opaque, in cases where there was no reason to suspect sympathetic disease.

A case has been recently reported by Hack* where exophthalmic goître seemed to depend on a neurosis of the sympathetic, from irritation of its peripheral filaments in the nose; there was extreme hypertrophy of the erectile tissue over the middle and lower turbinated bones. This was removed by operation; and several months after, the exophthalmos and palpitation had disappeared, and the goître diminished in size. This case, so far as it goes, is perhaps in favour of the cervical sympathetic being the seat of origin of the exophthalmos, goître, and palpitation; though the recovery does not seem to have been complete, and enough time has not elapsed since the operation to speak with confidence as to the future state of the patient. Experiments with a view to produce these symptoms by injury or destruction of the cervical ganglia have, I believe, failed.

In a few cases† diabetes occurred in patients suffering from exophthalmic goître; and since diabetes has been produced by destruction of the first thoracic and third cervical ganglia, this has been brought forward as an argument in favour of a lesion in this region of the sympathetic. The experiments by which diabetes was produced by injury or removal of these ganglia were, however, very contradictory—so much so, that no satisfactory conclusions can be drawn from them.‡

* *Deutsche med. Wochenschrift*, June 24th, 1886.

† Especially one reported by Dr. Lauder Brunton, St. Bartholomew's Hospital *Reports*, vol. x.

‡ Dr. Michael Foster, *Text-book of Physiology*, 3rd ed., p. 391.

Finally, Wilks, Paul, Fournier, and Ollivier, assisted by Ranvier, Ross,* and others, found nothing abnormal in the cervical or other parts of the sympathetic; so that, as Ross remarks, the pathological evidences of sympathetic lesion as the cause of Graves's disease are at least doubtful, and to be established as the *fons et origo mali* must be supported by independent evidence.

Such independent evidence, however, has seemed to some authors—Brown-Séquard, Benedikt, Long Fox, and others—to indicate that the cause of the disease must be sought for in the medulla oblongata and upper cervical cord; and I shall try to show that this is the most satisfactory hypothesis. Now, another way in which diabetes may be produced is by the well-known diabetic puncture in the medulla, at a spot corresponding pretty closely to the great vaso-motor centre in this region; producing diabetes, probably, by dilatation of the hepatic arteries. Close to this spot is another important centre, the cardio-inhibitory, whose function it is, through the pneumogastric, to exercise a constant regulating and slowing influence on the heart-beats; and if this centre ceases to act properly, the heart at once begins to beat rapidly in palpitation. It seems to me that palpitation in Graves's disease is better explained by deficient action of this centre than by any other cause.

Again: the marked loss of vaso-motor tone, showing itself by the general relaxation of arterioles that is constantly present in the disease, could be accounted for at first by some depressing influence acting on the adjacent vaso-motor centre; and the occurrence of diabetes in these few cases seems to throw light on exophthalmic goître by showing that the medullary centres, rather than

* Ross, *Diseases of Nervous System*, vol. i., p. 715.

the cervical sympathetic, are the parts at fault. Also, it was mentioned by Dr. Long Fox, at the discussion following this paper, that exophthalmos, pulsating goître, and palpitation have been produced by section of the restiform tracts.

Taking the symptoms of Graves's disease, then, in the order of their onset in the great majority of cases: The first evident symptom is palpitation, which may be explained, as above, by a deficient action of the cardio-inhibitory centre, produced in some way, most probably by antecedent changes in the molecular nutrition of the cells quite sufficient to produce serious disturbance of function, without leaving results appreciable by our present means of investigation. And this palpitation may be but the first outward and visible sign of some profound changes of metabolism and assimilation already established in the patient. Possibly this primary disturbance in the nutritive processes of the organism may be induced by changes in the metabolism of the thyroid—for we have strong evidences of change in this gland—which may either pour into the blood some product of mal-assimilation injurious to the sensitive cells of the medullary centres, or allow to accumulate in it some body which normally it should remove.

However this may be, we may surmise that the first change is some abnormality of the processes of assimilation and nutrition in the patient; and in the case I have read there is striking evidence of this in the remarkably small size of the liver and pancreas, and large bulk of the altered thyroid and persistent thymus. Paresis, or depression of the cardio-inhibitory and vaso-motor centres following on this mal-nutrition, produces palpitation and relaxation of arterioles respectively in the earliest stages

of the disease; while the exophthalmos and pulsating goître may be caused by a similar process extending to subordinate vaso-motor centres in the cervical spinal cord for the eyeball and thyroid,—exophthalmos being also probably caused in part by stimulation of the muscle of Müller.

After the earliest stages of Graves's disease, there is in most cases considerable anæmia; and since in anæmic persons palpitation occurs from relaxation of the arterioles, due to loss of vaso-motor tone, giving rise to disproportion between the action of the heart and the work it has to do, this anæmia would increase the palpitation and loss of arterial tone already produced; whilst, acting in a vicious circle, the two latter would again favour increased anæmia.

To this hypothesis of the rationale of the disease the fact that the other functions of the cervical sympathetic are normally performed is in no way opposed, while it is a formidable objection to the theory that attributes the prime cause of the disease to a lesion of the nerve in this situation. We can also explain the cases in which either exophthalmos or pulsating goître is absent by saying that in these patients the main centres in the medulla are alone involved, and for some reason the subordinate centres generally implicated in exophthalmic goître have escaped, the disturbance not extending to them; and since only a functional derangement, a disturbance of molecular nutrition in the cells, is postulated, we can understand that (even in cases in which the symptoms were originally severe) partial, as in the patient mentioned above, or perhaps complete recovery may take place—facts which would certainly be difficult of comprehension if the disease depended on a definite destroying lesion

in any part of the nervous system. Moreover, the undoubtedly beneficial effects of arsenic in Graves's disease receive explanation.

In conclusion, returning for a moment to the case which forms the subject of this paper, in this girl, who died after an attack of such unusually short duration, there seems to have been an intensification, or, if I may so call it, a "malignant" type of Graves's disease; for the rapid and unaccountable wasting that took place was quite out of proportion to the vomiting and diarrhœa that occurred, and to be explained only by some profound disturbance of the processes of nutrition, to which the *post-mortem* appearances also point.

Clinical Records.

ILL EFFECTS OF A SMALL ANEURISM OF THE AORTIC ARCH ILLUSTRATED.

By Henry F. A. Goodridge, M.D., F.R.C.P., Senior Physician to the Bath Royal United Hospital.

J. D., æt. 34, was admitted into the Bath Royal United Hospital on November 25th, 1884. Until two years previously he was in the Indian Army. Since then he had been a stonemason, or rather a dresser of free-stone, and for the same period he had suffered more or less from cough. Eight months prior to admission, being at that time employed in Paris, his cough and failure of health were such that he was taken into the British Hospital there, and remained ten weeks. He got better in the ensuing summer, but not quite well. For now, however, nearly two months he had become decidedly worse. His cough, which had much increased, had been attended with the expectoration of a large quantity of more or less opaque sputa, but with no hæmoptysis; he had sweated a good deal at night; he had latterly lost much flesh; for nearly a week his appetite had failed; and the last few nights he had had no sleep. His bowels had been regular. He continued his work until three weeks, and did not keep his bed until one week, before admission. His state at this date was as follows: He was suffering from considerable dyspnœa without any stridor,

and he had a frequent, thick, suffocative cough; his voice was weak, but not otherwise remarkable. He had some herpetic eruption on his lower lip; his pupils were normal; there was no distension of the cervical veins. His temperature in the axilla was 98·4°; his pulse was 112; his respirations were 28. On examination of the chest, hyper-resonance on percussion was observed at both bases posteriorly and about the spine of the left scapula; also at the sternal notch, and more or less over the left front; varying moist and dry rhonchi were heard behind with inspiration, particularly towards the bases, the moist sounds being all fine; the inspiration was very rhonchal under both clavicles—it cleared a little on coughing under the left, but not under the right; the expiration was very prolonged in the latter situation. The cardiac dulness was much obliterated, and the heart's apex-beat was not distinct either to sight or to the feel; the sounds at the apex had rather a tic-tac character; no murmur was audible anywhere. The hepatic dulness reached halfway to the umbilicus. His bowels were now somewhat sluggish; his urine was acid, of sp. gr. 1.027, and showed a trace of albumen. His feet were cold, but were free from œdema. He was ordered to be dry-cupped over the chest, and to take zinci sulph. gr. xx. ex aquâ calidâ the same evening, and pulv. rhei sal. ʒi. the following morning. 8.30 p.m.: He had vomited freely after the emetic, but he had scarcely less dyspnœa. His temperature now was 102°.

Nov. 26th.—He had slept very little, had sweated a good deal, and had still much dyspnœa, with an abortive suffocative cough. His temperature was 100° (evening, 100·6°). His tongue was coated with white fur, and he was taking food badly. He was ordered acidi nitrici

dil. ♏ xx. + extr. cinch. flav. liq. ♏ xv. + acidi hydrocy. dil. ♏ iv. + syr. scillæ ʒss. ex aquæ ʒi. every six hours, and to have six ounces of wine added to his diet.

27th.—He had slept altogether about one hour. After sleeping for a few minutes only, he awoke nearly suffocated, and sweating profusely. He was expectorating thick puriform masses. He took his milk, wine, and other fluids fairly, but no solid food. He was ordered chloral hydr. gr. x. ex aq. camph. at bed-time, and to be repeated, if necessary, every second hour for three doses.

28th.—He had dozed a good deal the preceding day, but had slept during the night only one hour and a half altogether. His cough was much the same, and attended with the expectoration of copious greenish nummular sputa. Subcrepitant rhonchus was heard under the right clavicle; under the left was less rhonchus, but the breathing there was harsh and exaggerated; sonorous rhonchus was present all about the left base. His urine was of sp. gr. 1.030; it deposited lithates, but contained no albumen. He was ordered to take ammon. carb. gr. xxx. ex aquâ calidâ the same evening.

30th.—As the carbonate of ammonia on the 28th had no emetic effect, he took the previous evening zinci sulph. gr. xx., and vomited freely, but was much oppressed in his breathing for an hour afterwards. He had slept about two hours. He seemed now rather easier; his cough was hardly so troublesome. His temperature was 99·8°, his pulse was 108, and his respirations were 32.

December 1st.—He had slept two hours; his breathing was still difficult; his cough was rather less; the sputa were of the same character, but less in quantity. His breathing was more free from rhonchus. His bowels

were not open. He was ordered to take pil. hydrarg. gr. iii. + pil. colocynth. et hyoscy. gr. vii., made into two pills, at 4 p.m.

2nd.—He had not slept at all, and seemed worse. His cough was almost incessant, and his dyspnœa was most distressing. His temperature was 99°. At the visit his complexion was noticed to be rather dusky; his pulse was 140; there were large mucous and submucous rhonchi at both bases, but the inspiratory sound was rather better in front. He was taking his liquid food well; his bowels had been opened twice; his urine was acid, of sp. gr. 1.035, and was free from albumen. At 6 p.m. he was sweating profusely; had most urgent dyspnœa—was, indeed, gasping for breath; his face was livid. He was ordered to have immediately liq. strychniæ ♏ iii. injected hypodermically, to discontinue the draught, and to have instead the following every four hours: ℞. liq. strychniæ ♏ iv., ammon. carb. gr. v., tinct. scillæ ♏ xx., aq. camph. ad ʒi. ♏. ft. haust.

3rd.—He had not slept more than one hour, and had been delirious more or less through the night, and was still so. His dyspnœa, however, was now distinctly relieved, and his cough and expectoration were less; he was also less livid in the face. His temperature was 100.4°; his pulse was 132; his respirations were 32.

4th.—He had slept about five hours continuously in the early part of the night; he was then awakened for food, and had only dozed a little since; he had had no delirium. His cough was less troublesome, though he had a bad bout of it just after waking; he had only slight expectoration. His temperature was 99° (evening, 100°); his pulse was 120; his respirations were 36. He was taking his food well.

5th.—He had slept only about one hour and a-half; he had had no delirium. He had coughed rather more, and had expectorated a little more frothy muco-purulent sputa. He was still dusky in the face. His temperature was 100°; his pulse 144; and his respirations 36. There was large bubbling rhonchus audible under both clavicles. 8 p.m.: His breathing was very laboured; his pulse was 132. He died at midnight.

On *post-mortem* inspection, the lungs exhibited evidences of intense bronchitis, with consolidation of the bases by catarrhal pneumonia. An aneurism, the size of a walnut, was found projecting from the posterior surface of the transverse part of the arch of the aorta. It had a round well-defined orifice, rather less than an inch in diameter, and no coagulation had taken place in the sac. The aneurism did not involve the origin of the vessels, being below the level of the same; but in its situation vertically it corresponded to the interval between the innominate and left carotid arteries. It pressed directly backwards on the trachea just above its bifurcation, and had the left recurrent laryngeal nerve quite near it, without, however, being compressed by it. Patches of atheroma were found in the aorta. The heart was healthy, as were also the kidneys, liver, and spleen. A little pigmented spot was present on the glans penis, otherwise there were no signs of syphilis.*

We remark first in the foregoing case that the patient was the subject of bronchitis. The origin of it seems to have been connected with his occupation of dressing free-

* The trachea and the aortic arch with the aneurismal protrusion, which were removed together in undisturbed apposition, I had myself the opportunity of inspecting; but for the other necroscopic particulars, as well as for much of the clinical record, I am indebted to our able house-physician, Dr. Edward Cave.—H. F. A. G.

stone, a dusty operation, in which the workman is liable to inhale the irritating particles of stone set free, and to suffer therefrom, as we in Bath have special opportunities of observing. He had not so very long been thus employed, not long enough to bring about those characteristic structural changes of lung-tissue which we know ultimately supervene in these and such-like cases, but sufficiently long to set up a chronic bronchitis with attendant emphysema. Exacerbations occurred from time to time, and his general health and nutrition had become considerably impaired. It was in one of these exacerbations, as it then seemed, that he was admitted into the Bath Hospital: it was undoubtedly a severe one, the fine capillary bronchioles being especially involved. Yet there appeared at first to be no reason why relief should not ensue from appropriate treatment. As was ascertained after death, however, and as was at length surmised during life, the patient's malady was not uncomplicated. He had a small (size of walnut) sacculated aneurism of the arch of the aorta, which pressed on the trachea. It was too small to compress or narrow the tube, and cause stridor; too small, perhaps, to furnish any direct sign or symptom whereby its presence could with any certitude be revealed; but it was not too small to interfere by its pressure with the efficient performance of expectoration, upon which recovery from the severe bronchial catarrh mainly depended. There was a hitch, an impediment, in the act of expectoration, very manifest latterly on attentive observation of the patient, and it was clearly situated high up in the air-passages. Emetics, usually so beneficial in capillary bronchitis, were of but little avail; strychnia, on the contrary, by goading, probably, for a short interval the bronchial muscle to unwonted exertion,

afforded marked, though transient, relief. The patient's cough was abortive, and the products of inflammation of the bronchial mucous membrane were inadequately expelled. Hence ensued accumulation in the tubes, with its asphyxiating tendency; while the same products inhaled into the pulmonary alveoli doubtless set up inflammatory changes therein, if, indeed, these had not already been initiated by extension from the bronchioles themselves. Thus lobular, catarrhal, or bronchopneumonia supervened, and death followed. We know that this is one of the ways in which larger aneurisms in the same situation now and then produce their fatal effects.

The case teaches, I think, how important in the mechanism of expectoration is the spot where the confluence of the expiratory currents from the two lungs takes place; and that the free and unrestricted play of the trachea at that spot is as essential to the efficiency of expectoration as are ciliary action, pulmonary elasticity, and contractile energy of respiratory muscles, in due amount respectively, on the one hand, and proper closure of the glottis on the other.

I would add that many years ago I had a somewhat similar case, where was latent, not an aneurismal tumour, but an enlargement of bronchial glands; and its recollection led me at length to suspect the existence of something of the kind in the present instance. The same peculiar difficulty of expectoration with little or no relief from emetics, in a case of capillary bronchitis or "suffocative catarrh," as it is sometimes called, would certainly lead me in the future to diagnose a similar complication.

A CASE OF SUPPURATING MIDDLE EAR, THROMBOSIS AND PHLEBITIS OF LATERAL SINUS, DEATH.

By W. H. HARSANT, F.R.C.S., Surgeon to the Bristol Royal Infirmary.

It is a well known fact that suppuration of the middle ear may terminate fatally in two ways: 1st, by purulent meningitis, or by the formation of cerebral or cerebellar abscesses; and 2nd, by septic phlebitis, thrombosis, and septicæmia.

In former times, when both these conditions were looked upon as hopeless ones, it was a matter of comparatively little importance to diagnose between them; but now that it has been so well proved that cerebral abscesses may be treated with great hope of success (two successful cases having been reported lately—one by Dr. Gowers and Mr. Barker, in the *British Medical Journal* of Dec. 11th, 1886; and the other by Professor Greenfield, in the same *Journal* of Feb. 12th, 1887), it becomes a matter of the greatest importance to distinguish between localised collections of pus in the cranium, on the one hand and thrombosis and phlebitis of the cerebral sinuses on the other. It has been laid down by Politzer that the symptoms of these two conditions are quite distinct, and that the differential diagnosis ought to be at all times easy. He says: "There is danger of confounding thrombosis of the lateral sinus with meningitis and cerebral abscess only in the case of the simultaneous appearance of the sinus affection with these brain diseases. When such is not the case, the differential diagnosis is all the easier, as the groups of symptoms characterising both forms of disease present many divergencies. Whilst in

meningitis and cerebral abscess there are neither such severe rigors nor such high temperatures as in sinus-thrombosis, *in the latter we find the brain symptoms only slightly marked, consciousness often remaining unimpaired even up to the end.*" *(Text-book of Diseases of the Ear.)*

Hartmann says: "As distinguished from the formation of cerebral abscess, the most important and earliest symptom of phlebitis is severe rigors. The pain is very great, limited to the region of the inflamed sinus wall, and increased on pressure. *Great restlessness sets in early, with delirium, convulsions, and extreme prostration.* Sometimes a temporary remission of the symptoms occurs, but the patient sinks, and coma and death ensue." *(Diseases of the Ear and their Treatment.)*

It may be seen, therefore, that two of the greatest living authorities on ear diseases give totally different accounts of the symptoms observed in phlebitis of the lateral sinus set up by ear disease, and further records of cases are required to enable us to distinguish accurately between this condition and cerebral abscess.

Case.—A shoemaker, aged 17, was admitted into the Infirmary, under my care, on July 20th, 1886. He had suffered from a purulent discharge and deafness in both ears since an attack of measles in early life. The left ear had given him attacks of pain from time to time, and the deafness in this ear had been greater than in the other. Two years before admission he had suffered from a severe attack of swelling and pain around the left ear, which had made him very ill for some weeks; but after free discharges from the meatus he recovered from this, and remained in his usual health until four days before admission, when he was taken with severe pain in the left side of the head and in the left ear: he noticed also an increase in the

purulent discharge from the meatus. On the day before admission he had a fit, and vomited.

On admission he was in a dull and heavy condition, sleeping constantly, coiled up on the right side. He could be roused with difficulty, and then answered questions in a morose and irritable manner; he yawned frequently, and expressed a constant desire to be left alone and allowed to sleep. The left meatus was filled with a polypus, and a profuse fœtid purulent discharge exuded from it. There was a slight purulent discharge from the right meatus also; but owing to the severity of his condition, this ear was not examined. His temperature was 104°, pulse 96; and he refused all food except small quantities of milk.

I thoroughly syringed out the left meatus with warm boracic lotion, removing by this means a quantity of inspissated secretion which was pent up in the tympanic cavity behind the polypus; I then insufflated powdered iodoform into the meatus.

On the next day he was decidedly worse: there was rigidity of the right arm and leg, and I was told that during the night he had had several severe rigors. His temperature was 106.5°, pulse 100, and he lay in a semi-comatose condition, from which he could not be roused. There was no vomiting, but he had several rigors during the day.

On the following day, after a consultation with my colleagues, I placed him on the operating table, and made "Wilde's incision" on to the left mastoid process; but I found nothing here abnormal—no pus, and no serous exudation. I then endeavoured to open the mastoid antrum by making an opening in the bone with a small gouge; but after going as far as I felt justified in doing, I could find no cavity, and nothing to indicate any mischief

here. The question now arose—What could be done further? The boy was evidently rapidly dying; and unless some relief could be quickly afforded, he would probably not live many days. The symptoms seemed to point to cerebral or cerebellar abscess, or to purulent meningitis.

I had had an opportunity of reading the three cases of trephining for cerebral abscess by Mr. Hulke, published in the *Lancet* for July 3rd, 1886, in one of which he readily reached an abscess in the cerebellum by an opening a little behind and below the mastoid process, and I determined to trephine here, hoping to reach the cerebellum just below the tentorium, immediately behind the angle where the lateral sinus passes down to the base of the skull. I made a crucial incision, and with a moderate sized trephine removed a piece of bone, exposing the dura mater. Then, with a scissors I made an incision in this membrane, intending to expose the surface of the cerebellum; but as I did so, a free gush of dark-coloured blood proved that I had wounded the lateral sinus at the upper angle of the wound. I at once inserted the point of my index finger into the opening, and with the slightest pressure completely arrested the hæmorrhage. I decided that nothing further could be done at that time; so I inserted a strip of lint, dusted with powdered iodoform, into the opening, and applied an antiseptic dressing, with a bandage round the head. The patient was then removed to bed, in exactly the same condition as before the operation.

From this time his symptoms underwent little or no alteration until his death, which took place on July 26th, four days after the operation. There was no further bleeding from the wounded lateral sinus. I removed the plug of lint on the second day, but as the wound was

inclined to ooze I inserted another plug, which remained in up to his death. The temperature varied between 104° and 105° during the last few days, and the coma gradually increased.

At the *post-mortem* examination I found that the opening in the dura mater had opened the left lateral sinus about one inch behind the meatus, just at the angle which the sinus makes in that position as it turns downwards to the jugular foramen. Close to the wound in the sinus was a large thrombus, which almost completely obstructed the channel, and which was surrounded by a mass of thick pus, granulations, &c., lining the walls of the sinus. The thrombus occupied about an inch of the sinus, just in front of and a little above the trephine hole. I satisfied myself that it did not start from the wound in the sinus, but that it must have existed for some days previously. There was a little pus found superficial to the dura mater, just above the trephine hole; but this possibly was caused by the operation, although I could not be certain of it.

The brain was examined with the greatest care, and there was no sign whatever of an abscess in the cerebrum or in the cerebellum. There was no caries of the temporal bone, nor any meningitis on its surface.

The external auditory meatus, on the left side, was filled with succulent granulation tissue, which extended through the membrana tympani into the middle ear; this cavity also containing caseous and purulent material.

The mastoid cells were scarcely at all developed on the left side, which accounted for my difficulty in opening the mastoid antrum. The right ear was not examined.

Was it possible to diagnose during life that this was a case of phlebitis and not of cerebral abscess? Perhaps

the high temperature and the somewhat rapid onset of the symptoms were points against abscess. In cases of cerebral abscess the temperature is often abnormally low, and the symptoms usually begin somewhat insidiously. Moreover, the pulse in cerebral abscess is usually slower than it was in this case.

The wound of the lateral sinus did no harm in this case, and it is well to know that hæmorrhage from these large venous trunks may be so readily arrested by pressure.

PERISCOPE.

PHYSIOLOGY.

Sodium Chloride.—What part does this play in the animal economy? It does not enter into the composition of any tissue, but all the physiological fluids contain it in notable proportions. The flesh of fish which live in sea-water has not a salt savour. Liebig believed that most of the sodium phosphate met with in animal bodies is formed from the potassium phosphate of plants, by double decomposition with sodium chloride. A solution of these salts, allowed to evaporate under a bell-glass covering, also a dish of conc. sulphuric acid, after some days deposited undoubted crystals of sodium phosphate. It is obvious that if common salt similarly favours the formation of this phosphate in a living organism, it is a physiological fact of great interest, and one which gives to this universal condiment a very important *rôle* with animal economy.—*Journ. de Med. de Paris*, and *Amer. Pract. and News*, Dec. 11th, 1886.

ARTHUR B. PROWSE, M.D.

MEDICINE.

Raynaud's Disease.—The marked feature in these cases is the localised temporary blanching of the fingers, toes, nose, ears, &c., followed in some cases by localised gangrene. Dr. Shaw, in a paper read before the Brooklyn Patholog. Society, April 22nd, 1886, gives details, from various sources, of 10 cases. Two were men, aged 32 and 51 years; the remainder were females, aged respectively 5, 5, 9, 32, 40, 41, 50, and 51. In most of these patients there was either abnormal irritability of the nervous system, or positive nervous disorder. Cold, emotional disturbances, fright, &c., appear to be exciting causes. In many of the cases the affection is symmetrical. In some it is associated with intermittent hæmaturia, and in others with diabetes. In the *chronic* form, lasting some months, there may be localised gangrene, followed by cicatrization, as in the acute; but more commonly there are manifested other alterations in

the nutrition of the parts, so that the skin becomes much thickened and indurated, resembling scleroderma. Sensation (?) and motion are said to be unimpaired; and the temperature of the affected parts may be lowered or elevated. The cause of the condition is believed to be vaso-motor spasm. As to treatment: galvanism locally, and to the spine, has been very generally used. Potassium bromide and iodide, arsenic, quinine and other tonics, are variously recommended; and where there is pain, morphia internally, and chloroform or light bandaging locally. In cases complicated with diabetes, scleroderma, &c., the treatment indicated for those conditions. —*N. Y. Med. Journ.*, Dec. 18th, 1886.

Three Attacks of Scarlatina.—A second attack of scarlatina is a rare event. It has never been seen by such authorities as Hebra and Bouchut. Dr. N. Woronochin, of St. Petersburg (*Jahr. f. Kind.*, B. xxv., H. 1, 2, 1886), reports a case in which a written record of each of three attacks was preserved, and the observations may fairly be assumed to be positive and free from error. The first attack was in 1868, when the patient was three years old: there was only a slight rash, but free desquamation. In the second attack, at the age of 10, there was a well-marked rash, with sore throat and swollen glands, followed by desquamation. The third attack, at the age of 21, lasted longer than the others: the rash was very abundant, and the desquamation characteristic; the other symptoms being also well marked. The patient was suffering from gonorrhœa for a fortnight before this attack began, and was treated with copaiba. It was at first thought the rash might be due to the drug; it was, therefore, continued during the illness, and appeared to exercise no influence whatever on the course of the fever.—*Edin. Med. Journ.*, Jan., 1887.

[During nine months' residence at the London Fever Hospital, I saw, among several hundred scarlet-fever patients, two undoubted cases of second attacks. One was in a man, aged about 20, employed at a large dairy, who had been in the hospital eleven months previously with an attack of moderate severity. On the second occasion the signs were well marked, and the course of the affection characteristic. The second case was that of a man, aged 43, who, after a somewhat mild attack, peeled freely. One month after his admission, the throat again became sore, the cervical glands enlarged, a bright punctiform rash appeared, and the fever was high. A few days later rheumatism set in, followed by pericarditis, which soon proved fatal. A *p.m.* examination showed that the pericardial fluid was purulent.]

Actinomycosis.—At the Chicago Med. Society (Nov. 1st, 1886), Dr. A. J. Oschner showed a case of this disease. The patient, aged 56, had been engaged for more than forty years in cattle farming. Many of the animals suffered from "lumpy jaw," and it was his practice to cure them by free crucial incision, turning out the contents, and introducing about 3i. of "powdered arsenic" into the cavity. In 1877 he began to suffer severe neuralgic pains in the left superior maxillary region; and six months afterwards an abscess opened into the pharynx, giving much relief. The antrum was then opened above the first molar tooth, and the curette applied. Irrigation was continued two or three times daily for two years. Since July, 1885, cough had been persistent, the expectoration being muco-purulent and streaked with blood. Microscopical examination showed the presence in it of the characteristic fungus. There were signs of partial consolidation in the left lung, above the fifth rib. Elsewhere the lungs appeared normal, and there was no evidence of disease in any other part of the body. The present treatment is inhalation of $\frac{1}{10}$ p.c. solution of corrosive sublimate.

A report of the pathological committee was read on another case of the same disease in a feeble, emaciated man, 25 years old, exhibited to the Society on Sept. 6th. "The lateral diameter of the neck is much increased by inflammatory thickening of the superficial tissues. On each side of the neck is a small fistulous opening, exuding a slight serous discharge. The jaws can only be separated to a slight extent; but, as far as can be determined, the mouth and throat present nothing abnormal. No carious teeth can be detected. There is evidence of consolidation in both apices: on the right side as low as the third rib, and on the left to the first intercostal space. There is frequent cough, and much expectoration. Specimens of the actinomycetes have been obtained from the sputum, and also from a small abscess in the neck."—*Medical Age*, Detroit, Dec. 10th, 1886.

ARTHUR B. PROWSE, M.D.

Albuminuria in Syphilitic Patients.—A report of the Paris Society of Medicine ends with the following conclusions:

(1) Syphilis in the first months of its appearance may give rise to albuminuria.

(2) This albuminuria is easily cured by anti-syphilitic treatment without leaving any ill effects, and must be distinguished from that which appears during the second or third year of the course of the disease. In the latter case

the appearance of albuminuria is of very serious significance, as it is probably the starting point of a chronic nephritis.

(3) Syphilitic patients, on account of the malaise always produced by syphilis, become more susceptible to cold, and therefore more predisposed to nephritis arising from cold and exposure.

J. MICHELL CLARKE, M.B.

THERAPEUTICS.

Goitre treated by Carbolic Acid.—Dr. O. E. Haven states, in the *Weekly Med. Record* (Sept. 11th, 1886), that he has seen a large number of cases of goitre in the public clinics in Chicago, all of which have been materially benefited and almost all cured by the injection of 20 or 30 minims of 5 p.c. solution of carbolic acid, once or twice a week, into the substance of the gland. To do this thoroughly, the needle of the hypodermic syringe is inserted half to one inch into the gland: little or no pain is felt, but only a sense of dizziness, lasting a few minutes. Contraction and hardening ensues; and in eight or ten weeks the tumour has subsided. In only two cases out of 150 did slight inflammatory symptoms supervene, and these subsided in a day or two.—*Therapeutic Gazette*, Dec., 1886.

Thymol as a Tæniafuge.—Dr. Numa Campi (in *Il Racoglitore Medico*) recommends this drug strongly. It is very slightly soluble in water, but easily in alcohol, ether, or alkaline solutions. Its taste is warm, bitter, and acrid. As a germicide and antiseptic, it has been found to be second only to mercuric chloride. It has proved efficient in destroying the anchylostoma duodenalis, the parasite which gives rise to what is known as "miner's anæmia." The method is as follows: Half-an-ounce of castor oil is to be taken, fasting, in the evening; the next morning, ʒii. of thymol divided into twelve doses, one to be taken every quarter-hour; to be followed by a second dose of castor oil. The drug is rather depressing, so it is well to give some stimulant during its administration. Up to the present, Dr. Campi has not found it fail.—*Therapeutic Gazette*, Dec., 1886.

Ergot for Headaches.—Dr. Sturgis, in the *Boston Med. and Surg. Journal*, recommends ext. ergotæ liq., in doses of ♏ x. thrice daily after meals, as very effectual in some of the headaches of children. He does not, however, indicate very clearly the character of the headaches benefited thereby.

Morphine in Diabetes.—Dr. Mitchell Bruce, in the *Practitioner* (Jan., 1887), has a paper founded upon observations on a diabetic man, 26 years of age, who was under treatment ten months. The observations were arranged in four series. The first extended over two days only, while the patient was on ordinary mixed diet and no medicine. The daily excretion of glucose at this time was 1,360 grains. The second series related to the patient's condition while on "strict Pavy diet," and no medicine beyond aq. camph. During the twenty-three days this was persevered with, the average amount of sugar was the same—viz., 1,360 grains. In the third period of sixty-eight days the rigid diet was continued, and solution of acetate of morphia given by the mouth in doses, at first of ♏ xv. every four hours, increased every three or four days until the daily amount ingested was $4\frac{3}{4}$ grains of the solid drug. Very slight drowsiness was produced by this quantity. The amount of sugar excreted steadily decreased as the medicine was increased, until at length none could be detected. For seven days now the strict diet was continued, but the drug omitted; the result being that sugar reappeared in the urine, and quickly increased to 2,400 grains per diem. In the fourth period the dieting was maintained, and morphia was given hypodermically, commencing with gr. $\frac{1}{4}$ thrice daily. This was increased by $\frac{1}{12}$ gr. every three or four days until a maximum of grs. iii. per diem was reached, and then drowsiness necessitated a diminution of the amount. At no time during this period of forty-nine days was the sugar less than 768 grs. in the day. A fifth series of observations was subsequently commenced, when the average daily amount of sugar was 4,000 grs., on rigid diet, and no medicine. Morphia was given by mouth again, commencing with gr. $\frac{1}{4}$ every four hours. On the ninety-ninth day, when exactly 7 grs. of the acetate was being taken, the sugar was reduced to a mere trace.

The physiological and pathological deductions the author draws are the following: (*a*) The glycosuria (in this patient) was proved to be due to an increased income of sugar to the blood, not to a diminished destruction of the sugar in the system. This is evident, from the fact that the drug had much less influence when introduced into the general circulation—where destruction of sugar is accomplished—than when introduced into the portal circulation. (*b*) The increased income of sugar was proved not to originate in simple transportation of sugar from the intestine or portal vein to the general circulation; for when all saccharine and amylaceous materials were excluded from the diet, the

patient continued to excrete large quantities of sugar. It was clear, therefore, that glycogenesis was still active, and that the sugar was derived from the nitrogenous constituents of the food. (*c*) The excessive glycogenesis that was going on was proved to be effected mainly or entirely in the liver, not in the muscles or any of the other viscera. This followed from two facts: (1) That when the morphia was introduced into the liver by the portal vein it reduced the sugar to *nil*, whilst it did not materially affect the other viscera, such as the central nervous system; and (2) that when it was introduced into the general circulation it diminished the amount of sugar excreted only to the degree that might have been anticipated from the portion that would reach the liver through the hepatic artery, whilst it markedly affected the other viscera, as shown by the drowsiness. (*d*) "These results appear to prove that in this instance, if the diabetes was of nervous origin, the seat of the disordered process—I do not say the seat of the nervous derangement originating it—was in the liver, not in the central nervous system or nerve-trunks." This also followed from the effect of morphia by mouth, as compared with its effect *sub cute;* for by the latter method the central nervous system was profoundly depressed, while there was but little effect on the glycosuria—through this channel probably *none*.

Antipyrin in Rheumatism.— Dr. Eich, in his inaugural essay (Basel, 1886) on the anti-rheumatic virtues of this drug, concludes that it is very prompt and reliable in its action, and is in no way inferior to the salicylates. In a very few cases it appears to fail just as the salicylates do. No unpleasant secondary effects were noticed. The daily dose was 60 to 90 grains at the outset, diminished later on to 30 grains.—*Therapeutic Gazette*, Nov., 1886.

M. Clément, of Lyons, from his experience in the Hôtel Dieu, prefers antipyrin to sodæ salicylas in the treatment of acute and subacute rheumatism. No vertigo, deafness, or tinnitus follows its use; and he denies that it is a cardiac depressant. In two cases, complicated with pleurisy and pericarditis, there was such a rapid absorption of the serous effusion that he is inclined to think it was materially assisted by the drug. He has always continued the administration for some time after the pain and fever have gone, and has found it easily tolerated even by weak stomachs. A daily dose of 60 to 90 grains was found rapidly effectual. In chronic rheumatism he found it of doubtful value, and in gonorrhœal pseudo-rheumatism it was of no more use than

the salicylates. In all cases in which it failed sod. salicyl. failed too; and in a few cases in which the latter failed it succeeded.—*Lyons Médical*, Aug. 29th, 1886, and *Practitioner*, Jan., 1887.

In the *N. Y. Med. Journ.*, Oct. 24th, 1886, Dr. Eccles states, that while making pharmaceutical investigations, he had occasion to mix some spt. eth. nitrosi with a solution of antipyrin. The mixture was at first clear and colourless, but after some hours became green. The optical appearances of the fluid were identical with those of the *anilines;* and as antipyrin was a coal-tar product, he supposed the change was due to the formation of a green aniline; and so it proved to be. This incompatibility is important, because both substances are used in febrile states, and might happen to be prescribed together.—*Med. Age*, Detroit, Dec. 10th, 1886.

Sodium Chloride in Bright's Disease.—Dr. Meminger, of Charleston, recommends this in consequence of the good results obtained in four chronic cases. Gelatine capsules containing 10 grains of common salt are given thrice daily, and on alternate days before and after meals. The number is increased every day until five capsules are being taken *ter die*, when improvement begins to be manifest, both in the state of the urine and in the general condition of the patient. After this, six capsules *per diem* are usually sufficient. Should nausea supervene, the recumbent posture, or a temporary omission of the drug is advised, and one or two alterative pills should be given.—*N. Y. Med. Journ.*, July 31st, 1886.

Trichlorophenol is prepared from carbolic acid by substituting three atoms of chlorine for three of hydrogen, thus: $C_6H_6O + Cl_3 = C_6H_3Cl_3O + H_3$. It is said to be a much more powerful antiseptic than phenol, and is being tried extensively both in Russia and the United States.—*Amer. Pract. and News*, Dec. 11th, 1886.

Lanolin Salves.—Dr. P. Bauskinski has made a series of test experiments, in regard to the absorption of various substances in lanolin salves, which antagonize the assertions of Liebrich and Lassar. He concludes that lanolin possesses no exceptional advantages over other fats, except its neutral reaction and slight destructibility; still, it is in most cases a good material for salves. "It is doubtful, as yet, whether we can be sure of the impossibility of communicating splenic fever by its use."—*Deutsche Med.-Zeitung*, and *Amer. Pract. and News*, Dec 11th, 1886.

Drumine is a new local anæsthetic obtained from Euphorbium Drummondii by Dr. J. Reid, of Port Germain,

South Australia. Cocaine has a mixed sensory and motor action, and causes preliminary excitement; but Drumine appears to be a purely sensory paralyser, and does not stimulate primarily. It does not affect the pupil. Given subcutaneously it was very successful (in doses of ♏ iv. of a 4 p.c. solution) in removing sciatica and the pain of sprains; and when dropped into the eye, or applied to the skin locally, was effectual in "tic."—*Australasian Med. Gazette*, Oct. 15th, 1886.

Quillaja Saponaria.—A 2½ p.c. decoction of this bark is a valuable expectorant, in conditions similar to those for which senega is prescribed, in doses of ʒ ss. for adults, or ʒi. for children. Dr. Kobert states that it contains the two glucosides found in senega, but in five times greater amount, whilst its cost is only $\frac{1}{10}$th that of senega. A common property of the two drugs is that, in consequence of the presence of *saponine*, 5 or 6 drops of the tincture will emulsify ʒ ss. of fixed oil. This property may be utilised in ordering turpentine, terebene, or eucalyptus oil, in cough mixtures. Quillaja contains enough sugar to sweeten its decoction, which is altogether more palatable than decoct. senegæ. Goldschmidt (*Aertz. Intelligenzbl.*, 1885) has confirmed Kobert's conclusions.—*Edinburgh Med. Journ.*, Jan., 1887.

ARTHUR B. PROWSE, M.D.

Diet in its relation to Therapeutics.—Under this title M. Dujardin-Beaumetz considers, the normal physiological diet being known, what is the effect of reducing or increasing the amount of this diet, and in what ways should the diet be modified in various maladies.

A smaller quantity of food is chiefly indicated in obesity, where it exists apart from acute disease or organic lesion. These patients are recommended to drink only white wine (clarets, hocks), and these diluted with an alkaline water in a quantity not exceeding 9 oz. at each meal; to eat only the crust of bread and no pastry; never to take tea with sugar between meals, sweet wines, beer, or liqueurs; to use purgatives frequently; to take much exercise and undergo massage.

Superalimentation finds its chief use in phthisis in the form of meat powders.

The author considers that the diet of the gouty, and of those who suffer from increased production or deficient elimination of uric acid, should be a mixed one; total abstinence from purely nitrogenous food, so long recommended, being a mistake. As regards meats, all kinds may be used, preference being given to the white kinds; eggs, fish, shell-fish, "ripe"

cheeses, and fats, to be taken sparingly. Vegetables should form a large portion of the diet, except those highly azotised, such as cabbage, broccoli, peas, beans, lentils, mushrooms, and truffles: these latter may, however, be used in smaller quantities. Spinach and sorrel only are forbidden. Fruits are recommended, especially grapes and strawberries. These patients should be encouraged to drink abundance of liquids, on account of their diuretic effect—for preference, water or alkaline waters; old wines containing little tannin, light wines containing little alcohol mixed with some alkaline water, and weak coffee, are admissible in moderate quantity. Champagne, beers, porter, artificial aerated waters, tea, liqueurs, sweet and "fruity" wines, are absolutely prohibited. The meals to be moderate in quantity, sufficient for nutrition without overloading the stomach, and regular.

In oxaluria, any food that tends to the formation of oxalic acid is to be avoided—*e.g.* highly spiced food and condiments, tea, cocoa, coffee, chicory, chocolate; peas, beans, celery, cauliflower, spinach, rhubarb, endive; dried fruits, oranges and raspberries.

In hepatic gravel, all fats, carbohydrates, sugar, and feculents that give rise to the formation of cholesterine, the determining cause of this gravel, are forbidden. Peas and carrots, that contain a body closely allied to cholesterine, are especially injurious. In short, the diet in these cases is to consist of lean meat and green vegetables, of fruits that have little sugar, of little bread, of no feculent foods, except potatoes, and of no pastry. If any wine is taken, it is to be diluted with alkaline waters.

In diabetes, M. Dujardin-Beaumetz considers potatoes especially valuable, inasmuch as they contain the least starch of all feculents, and recommends them in preference to gluten bread, which must be used instead of ordinary bread. All kinds of meat and fish, soups, clear or thickened with vegetables, except peas or beans, are allowed. Foods containing much fat, and vegetables, except carrots, parsnips, and beetroot, are recommended—more especially vegetables, from the variation they make in the dietary. All feculents, except potatoes, all fruits, alcoholic drinks, except wine mixed with a natural alkaline water, are forbidden. The patient should not drink anything between meals, unless he suffers from great thirst, when weak tea, or coffee without sugar or milk, or weak infusions of quassia or cinchona, are permissible. Muscular exercise and massage are useful as aiding the elimination of sugar.

In chronic albuminuria, milk takes the first place, with

the addition of fruits, vegetables, feculents, and fats. Eggs and meat of all kinds are injurious. If the appetite fails under the above *régime*, pork, especially fat pork, ham, or bacon, are preferable to other forms of meat. Milk is the best drink; but if the patient cannot take it for a long time, a light wine containing much tannic acid, mixed with an alkaline water, may be permitted. Since it has been proved that the quantity of albumen in the urine is increased after large meals, the meals should be small and often.

As to the use of alcohol in fever, M. Dujardin-Beaumetz considers that it is a true food in this condition, and that its action lies in undergoing more or less complete combustion in the organism at the expense of the oxygen of the blood, thereby diminishing the destructive metabolic process taking place in the tissues and lowering the temperature, or, in other words, checking tissue waste. At the same time, it gives strength and tone to the nervous system.—*Gazette des hôpitaux*, Nov. 20th and 27th, 1886.

Treatment of Diphtheria.—M. Brondel, practising at Algiers, states that by the following mode of treatment he has not lost a single case of diphtheria out of a total number of 200 treated in the last five years:

The method consists in the employment of benzoate of soda, vaunted by Letzerich as a true specific in diphtheria, in doses of 6—7½ grains in solution, according to the child's age, together with gr. ½ sulphide of calcium, in pill or in syrup, every hour from the onset of the disease. A 10% solution of benzoate of soda is sprayed into the throat by an atomiser every half-hour, regularly throughout the day and night in bad cases, but in those less severe the patient is not disturbed during sleep.

The above treatment must be rigorously carried out. The spray does not injure the throat in the slightest, if properly managed: under its influence the false membranes become pale, less consistent, more and more gelatinous, and finally disappear, dissolved by the benzoate of soda, leaving the underlying surface healed. Continuous vaporisation of terebene, eucalyptol, or carbolic acid is carried out at the same time. [This can be done by charging the air of the room with moisture from a steam-kettle containing one of the above antiseptics.]

The food consists of meat-juices, eggs, and underdone meat, if the state of the throat permits. Arseniate of strychnine is recommended as a tonic; antipyrin, or quinine, to control any excessive temperature, if present. Free ventila-

tion is to be ensured, and all linen and excreta thoroughly disinfected.

After the termination of the disease, the room is disinfected by sulphur.—*Gazette des hôpitaux*, Dec. 11th.

[Benzoate of soda has been given in doses of 380 grains daily without ill effect.]

Treatment of Enteric Fever.—Professor Bouchard has formulated new rules for the treatment of typhoid fever, based on his recent researches into the pathogeny of the disease. The chief indications are four: To render the tissues generally antiseptic, to disinfect the intestine, to combat hyperpyrexia, and to give nourishment.

When enteric is suspected, or has been diagnosed, M. Bouchard prescribes:

(1) A purgative administered every third day, and consisting of 3½ drachms of sulphate of magnesia.

(2) Six grains of calomel given daily in 20 divided doses, one dose every hour, for four following days, to produce general antisepsis.

(3) Disinfection of the intestine is carried out by a mixture consisting of—

Powdered vegetable charcoal ...	3½ ounces
Iodoform	15½ grains
Naphthaline	77 "
Glycerine	7 ounces
Peptone	1¾ "

The above quantity to be taken in twenty-four hours, in doses of a tablespoonful every two hours in water.

He washes out the large intestine regularly night and morning with an injection of nearly a pint of water, containing 1 pt. carbolic acid in 1,000 pts. water.

(4) From the first day of the disease to complete convalescence the patient takes eight baths daily. The temperature of the baths is to be 2° C. below the temperature of the patient, very gradually cooled down to 30° C., never below that point, in order to obtain loss of heat without nervous shock or spasm of the peripheral vessels.

(5) Quinine is administered in the few cases in which the baths do not keep down the temperature. The indication for quinine is a rectal temp. of 104° F. in the morning, or 105.5° F. at night.

(6) The food consists of 50–70 oz. daily of broth made from meat and barley, and of the glycerine and peptone in the above mixture; lemonade is allowed with a little wine.

In prolonged and excessive delirium, opium is given.

The mortality from enteric in M. Bouchard's wards used to be 25%. Since April 1st, 1884, he has treated 266 patients on the new plan given above, and has lost 31, giving a mortality of 11% only.

The mean duration of the disease has been 19 days. Relapses, which used to occur in 20% of cases treated by the old methods, are now reduced to 10%.—*Gazette des hôpitaux*, Jan. 22nd, 1887.

[Murchison gives the average mortality at the London Fever Hospitals as 17·5%.]

J. Michell Clarke, M.B.

Acetanilide (or Antifebrin).—This is a substance produced by the action of heat on aniline acetate. It has been found by Drs. Cahn and Hepp to be a powerful febrifuge in doses of 4 to 15 grains. Its action was not so evanescent as is often the case with antipyretics. Redness of the skin with moderate perspiration, thirst, and increased secretion of urine, were noticed in the twenty-four cases in which it was used. The skin of the extremities in some cases had, temporarily, a dark tint, but no unpleasant symptom was observed. It is an odourless powder, slightly soluble in water, readily in spirit. The taste is not unpleasant. The present price is one shilling an ounce.

Peritoneoclysis, Hypodermoclysis, and Vesicoclysis in Cholera.—A paper with the above title was read before the Bombay "Medical and Physical Society," on Feb. 6th, 1885, by Brigade-Surgeon C. Macdowall. In the *Lancet* of Oct. 13th, 1883, the author had recommended the use of large injections of warm water (plain or medicated), or of milk, &c., either subcutaneously or into the peritoneum, as a perfectly easy and safe means of reviving the circulation and the secretions, and prolonging life, in the collapse of cholera. He was then unaware that Dr. W. B. Richardson had tried the intra-peritoneal method in one case, in 1854, with success; and had also experimented (though not in cholera cases) with subcutaneous and intra-vesical injections. Absorption by the last method was found to be unsatisfactory. Intra-peritoneal injections of defibrinated blood have been employed successfully, in France, Italy, and Germany, as a remedy in pernicious anæmia. Hypodermoclysis with large quantities of water (not more than one-fifth of the body weight—say, about 20 pints) has been used with success in Italy in cholera. One or two grains of common salt must be added to each ounce of warm water: alkaline solutions are injurious.

The apparatus is extremely simple: a funnel, or a common large syringe without the piston, a piece of indiarubber tubing, and a medium-sized aspirator needle, is all that is necessary for subcutaneous clysis; while for peritoneoclysis, the sharp needle is replaced by a blunt cannula with an 'eye' at the side, as in a catheter. This is pushed into the abdominal cavity at the bottom of a small incision in the *linea alba*. It is an infinitely simpler and more practicable plan than intravenous injection. The author considers that hypodermoclysis is preferable to peritoneoclysis in most cases; though the latter should be resorted to if the former fails to produce good results. The order of efficiency he assigns is the following: (1) defibrinated blood; (2) milk, or solution of "white of egg;" (3) saline warm water.

ARTHUR B. PROWSE, M.D.

DERMATOLOGY.

Erythrasma and Eczema Marginatum.—Von Bärensprung designated by the term erythrasma an affection of the skin presenting a yellow or brownish-red appearance composed of elevated circles or patches having a curved well defined outline, the surface of which is rough and scaly, and found almost exclusively in those localities of the body where two skin surfaces are in immediate contact. In reference to its pathogenic and clinical signification, we are compelled to express the opinion that erythrasma starts as a simple eczema intertrigo, upon which settle secondary fungi, adding to the primary disorder the characters of a parasitic lesion in its further course. If the Microsporon minutissimum, found upon the normal skin, comes in contact with the lesion, then the disease will take on the symptoms of erythrasma; but if the Trichophyton tonsurans be transmitted, the disease will then appear as an eczema marginatum, as described by Hebra. Chrysarobin, or Goa-powder, used in an ointment (10 p.c.), rapidly effects a cure.—Dr. G. BEHREND, of Berlin, *Med. Press of Western New York*, Dec., 1886.

Dyed Hosiery and Skin irritation.—The German Government, after a searching investigation, have permitted the use of all the aniline dyes, except picric acid, for dyeing goods and colouring even articles of food. Manufacturers of aniline dyes agree that they do not know of any skin irritations caused by anilines among the workmen, whose hands, &c., are constantly exposed to their influence. In these cases the dyes are in a soluble form; but in hosiery the

colours are in as insoluble form as the dyer can ensure, and are therefore even less likely to be a source of trouble.—Mr. J. R. ASHWELL, *Journ. Soc. Chem. Industry*.

ARTHUR B. PROWSE, M.D.

LARYNGOLOGY.

Laryngeal Œdema.—In the *N.Y. Med. Journ.*, Dec. 18th, 1886, is a paper read by Dr. De Blois, of Boston, before the American Laryngological Association, giving details of the fourteen cases of laryngeal œdema which he had met with, among 4000 throat cases, during a period of six years. "Occurring as they did among different classes of people, at different times of the year, and in different institutions, it seems to me that these cases form a very fair standard of the frequency of the affection, at least in this part of the world—that is, one in every three hundred throat cases." "The 245, then, that Sestier reports, would represent over 70,000 patients at the same ratio. Œdema of the larynx would appear to be more prevalent abroad than here." Charazac found that of 21 cases of acute primary laryngitis with œdema, 8 died; and of the remainder, some recovered after, and others without, tracheotomy. This mortality is very much less than in earlier times, for Sestier believed that most cases proved fatal. Of the 14 cases reported in this paper, 8 recovered after scarification, and 6 under treatment by astringents.

ARTHUR B. PROWSE, M.D.

PATHOLOGY.

Mobility of the Heart.—Dr. Shershevski has, in *Vrach*, a paper on this question. He gives details of the examination of 40 persons, all of them free from cardiac and pulmonary affections, in whom he noted accurately the position of the heart's boundaries in the upright, dorsal, and right and left lateral postures. The chief mobility was towards the left; but there was often very perceptible displacement to the right, as well as backwards, and even downwards. Youth, nervous states, and freedom of the vessels from signs of sclerosis, were favouring conditions. Backward displacement was found in nearly half the cases; and this suggests the wisdom of examining the heart in the upright posture, especially when results have to be compared. In subjects over 60 years of age, or in whom there was early signs of arterial degeneration, there was little or no mobility.

ARTHUR B. PROWSE, M.D.

STATE MEDICINE.

A Travelling Hospital.—The (1886) November number of the *Spitalul*, of Bucharest, contains, among other articles which show that our Roumanian brethren are intent on keeping pace with the latest advances in medicine and surgery, an interesting report by Dr. Bejan, on an itinerant dispensary and hospital system which is being applied in some of the rural districts of Roumania. Doctors are scarce outside the great towns of that country, and there is evidently a great field for philanthropic medical labour among the peasantry. Dr. Bejan's medical mission was organised on a military basis; and its aims were not limited to affording medical and surgical assistance to the rural population, but included hygienic and sanitary instruction, the collection of statistics of sickness, and the clearing of the ground, so to speak, for the speedy formation, whenever and wherever necessary, of an organisation to combat cholera or any other formidable epidemic.

Dr. Bejan's hospital and dispensary travelled, during the three months of summer, in the districts of Botosani and Dorohoï, succouring during that time upwards of 9,000 patients. Of these, about 7·5 per cent. were cases of malarial fever—not a very large proportion, considering the nature of the localities; but the proportion of cases of pellagra was not less than 23 per cent! and in Dorohoï the ratio was still larger. It would appear, therefore, that Roumania, whose climate might perhaps have been thought more propitious to the maize-plant than that of Upper Lombardy, is nevertheless equally the home of pellagra.

JOHN BEDDOE, M.D.

Notes on Preparations for the Sick.

Benger's Preparations of the Natural Digestive Ferments. MOTTERSHEAD & Co., Manchester.

The profession is now keenly alive to the value of the process of artificial digestion in the preparation of foods for the invalid; and in no respect has treatment undergone more improvement in recent years than with regard to the use of peptonised foods in cases of gastric disease, or in cases of great prostration, where the digestive power of the stomach is in abeyance. The name of Mr. Benger has been closely associated with that of Sir William Roberts in connection with the introduction of peptonising agents, and to them jointly the physician and the invalid are infinitely indebted for the potent aids to recovery which their work has given. The text books on stomach disease need to be entirely re-written; and it is not too much to say that peptonising materials are by far the most important drugs in the treatment of ulcer and other stomach affections. We have not seen statistics on this point; but it would be of interest to contrast the per-centage recoveries of cases of gastric ulcer under present treatment and before the process of artificial digestion had come into daily use. Our own experience is that recovery from gastric ulcer is now the rule, and that the persistence of ulcer for years, in spite of treatment, is likely to be the exception.

Another fact bearing on this subject is the abolition of wet-nurses. The custom of endeavouring to preserve the life of a weakly child of well-to-do parents, by risking that of some other presumably less valuable life—apart from the moral and social aspect of the question—now has no rational medical foundation, inasmuch as artificial foods can be prepared which will be more easily digested than the mother's milk, and will answer the purpose far better and with less risk to the child than is entailed by a wet-nurse.

Liquor Pancreaticus (Benger) is now so well known that it needs no commendation. As it was the first, so it remains one of the best, means by which milk can be predigested,

when the casein cannot be naturally transformed into peptones by natural means and without risk to the organs diseased. Its great utility depends upon the facility with which it can be used for the preparation of partially digested foods without materially impairing their natural flavour. It is true that if digestion be carried too far, the product becomes bitter and nauseous; but the action should be stopped by boiling before the final stages of pancreatic digestion are reached, and the intermediate condition—full solution of the insoluble casein, with an absence of bitter nitrogenous products—can be obtained by attention to the instructions for use which always accompany the fluid. As regards the necessity for boiling, this may be dispensed with when the peptonised product is intended for immediate use, or when intended for rectal alimentation, as in this case a bitter taste will not be of consequence; but if the product be intended to last for twelve hours or longer, at the temperature of the air in warm weather, boiling becomes a real necessity.

Benger's Peptonising Powders. — We have found these powders to be most efficient and convenient peptonising agents. They are perfectly soluble, colourless, and odourless; and each powder will completely peptonise one pint of milk. Where the milk is only required at long intervals, we have found it convenient to prepare half a pint at one time, and eliminate the process of boiling, the milk being prepared just when required for immediate use; but, of course, if peptonised, or partially peptonised, milk has to be kept, it must be boiled, whatever peptonising agent is used, or the process will go on till the product becomes disagreeable.

We have had no complaint from patients as to the taste of the milk after the use of these powders; on the other hand, one patient, who has tried all the usual methods, states that with Benger's powders, the taste is practically unchanged, and hence she prefers them to the other methods. She has also observed that now and then vomited matters contained curdled casein when only peptonised milk was taken; but this has not been observed when the milk had been peptonised with the Benger's powders. This patient peptonises half a pint with half a powder, and takes it whilst hot: she prefers to take it freshly prepared and warm.

Liquor Pepticus (Benger). — This preparation we have found to be and to do all which its maker claims for it. It is a concentrated and exceedingly active fluid pepsine, acidulated slightly; and it keeps well.

For internal administration it is one of the most active

aids to digestion in the stomach. For experimental purposes in the laboratory we have always found it to be exceedingly active, and of course it is likely to be still more efficient when acting under normal thermic and mechanical conditions inside the stomach.

Benger's Peptonised Beef Jelly.—An agreeable, partially digested food, containing more real nutriment than the ordinary meat extracts, readily soluble, and likely to be absorbed easily and quickly. Taken cold as a jelly it is very convenient for the bedside, as it requires no preparation, and should be especially valuable for old people and invalids who cannot go many hours without nourishment, and require something at intervals through the night or in early morning. Dissolved in hot water, it constitutes an easily made and highly nutritious beef-tea restorative.

Benger's Peptonised Chicken Jelly is an elegant variety of food, physiologically similar to the above, but with a different flavour, and likely to be useful to patients who require frequent changes in their dietetic programme.

Benger's Food, for Infants, Children, and Invalids.—This preparation is a cooked and pancreatised farinaceous food. It is superior to malted foods for the following reasons: when mixed with warm milk, or milk and water, the pancreatic ferments not only render the starchy matter soluble, but partly digest the casein of the milk, so that hard, indigestible masses of curd cannot form in the stomach. We have given it in many cases, and have found it to fulfil all the purposes for which it has been devised. It is pleasant to the palate, and is one of the most acceptable and useful preparations for patients in acute diseases where solid food is prohibited—typhoid fever, for instance; as also where a variety from peptonised milk is needed, as in cases of ulcer and other chronic gastric diseases.

"Lion" Food Delicacies. EDGE BROTHERS, LIMITED, London.

We have received three of these preparations, which we have tried and found excellent. The Beef Essence and Chicken Essence are most inviting in appearance, mounted in air-tight, elegant glass bottles, showing the contents bright and clear, and equally agreeable to the taste. They are evidently prepared with the greatest care, the fatty matter having been removed

by filtration through paper, leaving the soluble nitrogenous constituents of the colour and consistence of calf's foot jelly. They are best taken cold, and are most convenient and efficient restoratives in all cases of prostration where more solid nutriment cannot be taken. We have found them to be very useful in cases of gastric disease where even peptonised milk could only be taken in limited quantity.

The Beef Tea Jelly is also mounted in glass bottles, and is very convenient for the ready preparation of beef tea by diluting with hot water. It is made from the best portions of beef, all glutinous and sinewy tissue being carefully rejected: it is rich in nutritive matters, potash salts, and phosphates; and has a flavour resembling the best home-made beef tea.

The "Lion Brand" preparations form a most useful addition to the resources of the physician in the management of the sick, and we can recommend them strongly to the notice of those who have not yet begun to appreciate their advantages.

Coca: Non-alcoholic Table Water. J. SCHWEPPE & CO., LIMITED, London.

We have received a sample of this beverage, and also of a Purified Essence of Coca Leaf, each fluid ounce of which contains the active principles of one ounce by weight of the leaves of the Erythroxylon Coca.

The uses of Cocaine are now generally recognised, and seem likely to steadily increase. It is no novelty that it should be employed as a beverage, inasmuch as the Indians of Peru have so used it from times of antiquity. We doubt if this combination is likely to become a popular drink, inasmuch as those who require a non-alcoholic effervescing water will probably prefer Apollinaris; and those who require a drug will dilute the essence for themselves, either with Seltzer or plain water.

Malt Extract. M. HOFF, Hamburg and London.

The Hamburg Hoff's Malt Extract, a fluid described as "the beverage of health," is said to be a concentrated diet peculiarly suitable to convalescents and invalids. It is also considered to be a superior and palatable table beverage and tonic, more especially applicable to abstainers from all intoxicants. It is put up in bottles, and in appearance resembles

stout: it is intended to be taken in its natural state with the food, in quantity amounting to one bottle daily.

It appears to have obtained a world-wide reputation, and its manufacturers claim for it a great variety of uses in many diseases, ranging from mild dyspepsia up to tubercular phthisis; in the latter case, its regular use is said to prolong life for ten or even twenty years. Such statements are difficult to prove, and equally so to disprove: we are not inclined to attempt the latter, as the chemical composition of the compound shows it to have a decided nutritive value, both as an aid to digestion and in supplying materials for blood making.

We think that the taste for stout is always acquired; nevertheless, it is a popular drink. In the same way it would be easy to acquire a taste for this useful beverage, and accordingly it might be as popular as stout. As yet, we have not found anyone naturally educated up to its standard of taste: might not this standard be more in harmony with the uneducated palate?

Aesculap. The Aesculap Bitter Water Co., Limited, London.

We have received samples of this, one of the best known and most popular saline aperients. Its purgative properties are due to the sulphates of soda and magnesia, which are materially modified by the presence of a large proportion of bicarbonate of soda. It accordingly serves the double purpose of neutralising the acid of the gastric fluids, and then acting as an efficient stimulant to intestinal secretion, culminating in the copious discharge of watery evacuations. We have used it frequently, and have found it to be one of the most efficient waters of its kind. Every precaution is taken to secure freedom from organic impurity, and its comparative tastelessness gives it a decided superiority.

Pepsina Liquida (Schacht). Giles, Schacht, & Co., Clifton, Bristol.

This preparation has an extraordinary solvent energy on comminuted egg albumen. We have seen the product obtained by digesting in a water-bath, at 130° F., of one thousand grains of egg albumen in one drachm of the liquid pepsine, with twenty-eight minims of hydrochloric acid and six ounces of water. The solution is clear, and devoid of disagreeable

odour: it gives no precipitate on boiling, and none with acetic acid; but precipitates abundantly on neutralisation, and with nitric acid. The precipitate with picric acid in Ebstein's albuminometer indicates about one per cent. of dried albumen in solution. On testing for peptones with Fehling's solution, we obtained the biuret reaction; and on dialysing the solution for six hours we found indications of peptone in the dialysate, as shown by a slight precipitation with tannic acid, also with picric acid, and with potassio-mercuric iodide.

These tests show that the product of the action of the liquid on egg albumen is an exact imitation of the first stages of gastric digestion—*the formation of a solution of acid albumen*—and that little of the albumen is transformed into peptone. The molecule has clearly not become so transformed as to be capable of ready dialysis: little albuminous matter was found outside the dialyser, whereas the fluid after dialysis still gave a precipitate with picric acid, indicating the presence of ·68 % of albumen in solution.

We must congratulate Mr. Schacht on his success in the preparation of a fluid which has so powerful a solvent action on albuminous foods, and is at the same time bright, inodorous, palatable, and inexpensive.

Compound Syrup of the Hypophosphites. LORIMER & Co., London.

This is a syrup composed of the hypophosphites of lime, sodium, potassium, iron, manganese, quinine, and strychnia, combined in a clear solution, which is neither acid nor alkaline; is colourless, odourless, and agreeable to the palate. A syrup of this composition, and with no disagreeable qualities, must have a very wide range of utility. The physician need not hesitate to prescribe a compound of which the composition is indicated on the label; and the number of medicinal substances mentioned there will suggest the idea that a corresponding large number of diseases are likely to be benefited by the use of one or other of the components. We have, however, little faith in the selective power of individual ingredients for particular tissues or organs. The compound, as a whole, has a composition which, on theoretical grounds, should be of great value in many varieties of defective nutrition, and which is found by the test of experience to perform everything which can reasonably be expected of it. We commend this syrup to those who have not used it, in full confidence that it will not disappoint them.

Reviews of Books.

Paralyses: Cerebral, Bulbar, and Spinal. A Manual of Diagnosis for Students and Practitioners. By H. Charlton Bastian, M.A., M.D., F.R.S., Fellow of the Royal College of Physicians, &c., &c. With numerous Illustrations. London: H. K. Lewis. 1886.

In a volume of considerable size, Dr. Charlton Bastian has provided a grammar of diagnosis, both pathological and regional, of the various forms of paralysis having their origin in the brain, bulb, and spinal cord. It is not pretended that all that is known about the several varieties of paralysis is fully stated in the work; but the author's endeavour has been to facilitate diagnosis by the student or practitioner, by setting forth so much concerning each form of paralysis as is necessary for its separate recognition. This, on the whole, is true, and a most useful and helpful work the one under consideration indeed is; at the same time, no one will be surprised if the author of *The Brain as an Organ of Mind* becomes occasionally a little discursive on some topics beyond the strict requirements of the diagnosing student, passing out of the realms of Medicine into those of Philosophy. For the most part, however, he considerately records these excursions in smaller print than the fundamental text, and even goes so far as to suggest (p. 101, *e.g.*) that the reader may skip them, if deemed supererogatory.

Of a work like the present, divided up into many chapters and sections, anything approaching an analytical review is out of the question here, and we can therefore but express an opinion upon it as a whole. The varieties of paralysis are now so numerous, and as yet, in some instances, so liable to be confused one with another, that a manual of differential diagnosis is a distinct desideratum; and few persons are better qualified than Dr. Bastian to compile such a book as this, which undoubtedly supplies a want. To two or three chapters we have turned with special and minute interest, in order to see what Dr. Bastian has to say upon the subject-

matter of them severally. Of most of these we would speak with unqualified satisfaction; but the chapter on the causation of contracture, ankle clonus, and exaggerated knee-jerk, as well as the chapter on paralyses due to lesions of the cerebellum, seem to be the neurology of the day before yesterday, not that of to-day. As to the existence of reflex paraplegia, Dr. Bastian is a sceptic; but obviously does not like to say as much unhesitatingly, for fear of wounding the beliefs of his surgical friends. The surgical medicine-man is a devout fetish-worshipper, and, "suckled in a creed out-worn" (neurologically speaking), often invokes the mythical deity, reflex paraplegia, in order to explain the, to him, inexplicable. His simple faith should be respected therefore even by the unbeliever, and not be ruthlessly destroyed by the iconoclastic physician! On p. 10 it is stated that peripheral paralysis will be dealt with only so far as it concerns the nerves that arise within the cranium. This is a mistake, when we know that many cases of paraplegia are not spinal in origin at all, but are affections of the peripheral distribution of spinal nerves, and demand efficient help, in order that they may be diagnosed from lesions of the spinal cord proper.

A word in conclusion about the illustrations. As the title-page says, they are numerous—numerically superior to their pictorial value. Most of them we have seen one or more times before, having advanced in decrepitude at each successive reproduction. Shade of Bewick! it is well that "mechanical" processes are coming more and more into vogue, to save thy art from its extremest profanation.

The Treatment of some of the Forms of Valvular Disease of the Heart. By ARTHUR ERNEST SANSOM, M.D. Lond., F.R.C.P., Physician to the London Hospital, &c., &c. Second Edition, with Additions and Corrections. London: J. and A. CHURCHILL. 1886.

The first edition of this book being out of print, after a lapse of more than three years, Dr. Sansom has issued a second edition, and has taken the opportunity to incorporate into the reissue many facts, pathological and therapeutical, which have been made known in the interval. Although the running title of the book is *Valvular Disease of the Heart*, it consists of three sections only, treating respectively of Endo-

carditis, Mitral Regurgitation, and Mitral Stenosis, lesions of the aortic valve not being considered.

Endocarditis Dr. Sansom divides into four varieties; viz., exudative, sclerous or fibrotic, atheromatous, and ulcerative. In simple endocarditis, attention is called to its frequent development, in children especially, without rheumatic or other pyrexia of any sort, the non-febrile form usually leading to the production of mitral stenosis.

The remarks on the ulcerative form recognise the recent researches of Orth, Socin, Osler, and others: these show how constantly the two varieties of staphylococcus pyogenes are to be found in the vegetations, being usually most numerous at that part where the structureless material joins the granulation tissue; and further, that the "ulcerative" process generally supervenes upon a former endocarditis of the simple variety, the breach of epithelial surface existing in already diseased valves affording an easier entrance to the spores of the micrococcus than a valve structurally intact. It is refreshing to meet with statements and views so sound as Dr. Sansom's in these days when "ulcerative endocarditis" is talked about with a vague and bewildering laxity.

In the lecture on mitral regurgitation, Dr. Sansom gives it as his view that apex systolic murmurs, not presumably associated with organic mitral disease, are due to the muscles around the mitral ostium being enfeebled, and therefore do not contract the orifice sufficiently for the valve-curtains to be capable of completely closing it; the determination of the outline of the heart by percussion, he thinks, serves as means for differential diagnosis of these cases from those of organic mitral disease. In the treatment of mitral incompetence, Dr. Sansom considers that digitalis, which may be often taken for years with advantage, is of little use when there is marked tricuspid regurgitation. Of caffein he thinks highly when compensation has failed and dropsy has been developed; convallaria is but seldom of value as a substitute for digitalis; strophanthus is not mentioned; and urethan, as a hypnotic, he considers as a distinct gain to cardiac therapeutics. Of Oertel's method of treatment of commencing failure of compensation (shown by dyspnœa and commencing dropsy)—viz., promotion of vigorous efforts of the cardiac muscle by severe muscular exercise with a highly nitrogenous diet and a very limited quantity of fluid—Dr. Sansom is in favour, but with some restrictions, and in selected cases only.

The chapter on mitral stenosis is admirable, and illustrated by cardiograms and sphygmograms in a highly instructive manner, showing how the diagnosis may be rendered easily certain,

even in the absence of a pre-systolic murmur. In treatment, Dr. Sansom thinks digitalis of much less value, and convallaria of much more value, than in mitral incompetence; and caffein probably less efficient a diuretic in the dropsy of the later stages of stenosis than of incompetence of the mitral valve.

Dr. Sansom's book we heartily commend as most worthy and profitable to be read: it is short in length, simple in language, and sound in logic. If there be any other virtue which a book can possess, let it be added to these.

The Diseases of the Ear and their Treatment. By ARTHUR HARTMANN, M.D., Berlin. Translated from the Third German Edition by JAMES ERSKINE, M.A., M.B. pp. 283. Edinburgh: YOUNG J. PENTLAND. 1887.

Dr. Erskine has earned the thanks of all English students by translating this concise and practical work, which in its original language has rapidly reached a third edition.

The book is prefaced by a very interesting historical sketch of the treatment of ear diseases, commencing with "an ancient papyrus scroll preserved in the Egyptian collection of the Berlin Museum, and supposed to date from the reign of Rameses II., who adopted the Jewish lawgiver, Moses, *i.e.* the fourteenth century B.C." The author's arrangement of subjects is methodical and clear. Commencing with a chapter headed "Diagnostic," he passes on through "Symptomatology," "Frequency, Ætiology, and Prophylaxis of Ear Diseases," and "General Therapeutics," to the chapters on particular ear diseases; while the translator has added an appendix, containing a list of instruments and the therapeutical formulæ in a form for easy reference.

Chapter iii. is a particularly good one, and is full of practical suggestions for the practitioner. Thus, on p. 64 we read: "Under ordinary conditions, the healthy ear does not need to be protected from cold; only during extreme cold or stormy and rainy weather ought cotton-wool to be inserted, into children's ears especially. The same precaution must be taken in the case of every ear predisposed to inflammation. All persons whose membranæ are perforated ought to protect their ears with cotton-wool. The entrance of cold fluids into any ear must always be prevented; and so, while bathing or diving, the ear ought to be plugged. Patients

with perforations of the membrane should be very careful in this respect, as violent inflammation may be caused by the entrance of cold water."

In speaking of the removal of plugs of cerumen, the author mentions that tepid water has been found a better solvent for this secretion than any other fluid, such as oil, brandy, or lime-water; but he speaks with approval of the addition of a little soda to the water.

He classes inflammations of the middle ear into acute and chronic, further subdividing the former into acute catarrh and acute purulent inflammation, and the latter into chronic catarrh and chronic purulent inflammation; this arrangement strikes us as simpler and better for all practical purposes than any other which has yet been suggested.

He divides polypi into three kinds; namely, *granulations*, *fibromata*, and *myxomata;* and says that granulations are most frequently observed, forming 55 per cent. He recommends the wire snare for their removal, and mentions chromic acid as the best caustic for applying to the stumps.

He approves of the antiseptic treatment of diseases of the middle ear with suppuration; but dismisses one popular remedy with the curt remark (on p. 184) that "iodoform has proved bad."

We are surprised to observe that, in a work which is otherwise so well up to date, so little allusion should be made to trephining for intra-cranial suppuration, the result of ear disease. The author simply says that "Schede brought about a cure in the case of an abscess in the temporal bone by opening it from the outside." We fancy this must have been written some years ago.

He does not look upon Menière's disease as due to a definite lesion, but speaks of it as "Menière's complex of symptoms," and says it may be due to—

1. Stimuli from the middle ear.
2. Disease of the labyrinth.
3. Pathological processes in the brain.

The work of the translator has been performed with great ability, upon the whole, although there are a few blemishes. Thus, on p. 142 we read: "When the renewal of air between the tympanic cavity and the atmosphere through the tubes ceases, the quantity of air contained in the tympanum diminishes due to exchange of gases, and resulting in a preponderance of atmospheric pressure upon the outer surface of the membrana tympani, driving it inwards."

The name of the publisher is a sufficient guarantee for part of the work.

The Journal of Laryngology and Rhinology: an Analytical Record of Current Literature relating to the Throat and Nose. Edited by MORELL MACKENZIE and R. NORRIS WOLFENDEN, assisted by able Coadjutors in this and other Countries. London: J. & A. CHURCHILL. No. 1. January, 1887.

We are pleased to welcome a new English journal, which deals with the important literature relating to the throat and nose. It is conducted on the plan of a German *Centralblatt*, and aims at analysing every article dealing with Laryngology and Rhinology, no matter in what language it may have been originally written. It is evident that it has a *raison d'être* in the fact that since the *Archives of Laryngology* became extinct, there has been no journal covering the same ground and printed in English; and although the German paper edited by Semon, and the *Revue mensuelle de Laryngologie*, edited by Moure, are very valuable, they are not read by many in this country, because they are not written in our mother tongue. It is published monthly.

The Normal and Pathological Histology of the Human Eye and Eyelids. By C. FRED. POLLOCK, M.D., F.R.S. Eng. With 230 original Drawings. London: J. & A. CHURCHILL.

This book mainly consists of excellent lithographic plates very carefully copied by the author from microscopic specimens prepared by him during several years of continuous research. A short description accompanies each plate, so that no one can fail to understand its meaning; and 160 pages of well-written descriptions of the various structures composing the eye, under conditions of health and of disease, assist in forming a volume which will be found of practical use in the eye-work of the practitioner as well as in the study of the ophthalmic surgeon.

The rational treatment of diseases of the eye can only be based upon a competent knowledge of the minute structure of its constituent parts, as well as of their anatomical arrangement. A good clinician is likely also to be a competent

microscopist; but it is a great gain to possess accurate representations of so complete a set of specimens as this volume includes.

The first part of the book describes, concisely but thoroughly, the various structures composing the eye, arranged in anatomical sequence: each one is considered—1st, in its normal histology; 2nd, under its more common pathological alterations.

The order of the illustrations found in the latter part of the book agrees as closely as possible with that of the text, and the one part should be read in reference to the other.

One hundred plates contain 230 excellent lithographic copies of the tissues, in health and in disease, and scarcely any condition that could be expected is absent; amongst them are sclerotitis, episcleritis, Descemetitis, lymphatics of choroid, pars ciliaris retinæ, cystic degenerations of ora serrata, and a series illustrating the development of the eye.

The book is based upon a study of the most important monographs of each subject, and can be highly recommended as complete of its kind. It covers the ground occupied by Pagenstecher's and Genth's atlas, and will be found more generally useful than the larger work, though it does not fully replace it.

SCRAPS

PICKED UP BY THE ASSISTANT-EDITOR.

A Green Old Age.—A town councillor in an ancient borough, in a speech at a meeting called in support of a public movement, said: "I think I may be excused from taking a very active part in this question, as I am an octo-geranium."

Prophylaxis.—"So Doctor Pellett is dead?" "Yes. He was an ornament to his profession. He has saved a great many lives." "Why, I didn't know that he had any practice to speak of." "He hadn't; he saved life in another way." "How was that?" "By dying so young."

A very Broad Hint.—A physician in this city is said to have the following inscription on his bill-heads: "A patient's gratitude to his doctor is part of his disease, and is most declared when the fever is highest, cools off during convalescence, and entirely disappears with the complete return of health. All bills due upon presentation. Office prescriptions and attendance strictly cash."—*The Medical Record* (New York).

An Opportunity for Bath.—It is somewhat strange that Bath has not followed the example of other towns by devoting one Sunday in the year to the benefit of her hospitals. The Rev. M. E. Hoets, in advocating, the other day, the claims of the old Mineral Water Hospital, alluded to this want—a want which, it is to be hoped, will soon be supplied. Will not the good citizens of Bath come forward and help to establish a Hospital Sunday Fund? Surely philanthropy in Bath ought not to lag behind that of smaller and more humble towns.—*The Hospital.* [Perhaps, since this was written, a day has been set apart for the purpose.]

Novelists' Medicine.—Lady writers of fiction, as a rule, limit their literary eccentricities to excursions amongst the amorphous elements of "Novelists' French" and un-English grammar. They sometimes deal freely with poison and the dagger, but rarely venture upon strictly anatomical details. The most unfortunate *lapsus calami*, however, which has come under our observation was thus incurred. The hero, with great difficulty, has succeeded in saving the heroine from falling down the precipitous side of a mountain on which they have lost their way. The lady has fainted, and is apparently lifeless. But, to his intense relief, the gentleman discovers, "by the pulse in her femoral artery," that the heart still beats.—*Medical Times.*

A Pharmaceutical Term of Reproach.—Our readers are all doubtless informed as to the brilliant war of words that once took place between a Billingsgate fishwoman and a scholar, in which the latter made use of mathematical terms that his adversary could not match; not precisely in the same line, but evidently quite as effective, was an expression of disgust lately applied by a woman to a Paris policeman: "Tu me fais l'effét d'une pilule." This pharmaceutical abuse was more than the policeman could endure, and the woman was brought before one of the police courts, where, according to a Paris despatch to the London *Daily Telegraph*, she was acquitted, on the ground that there were a thousand kinds of pills, the effects of which were of the most varied character, but she had not mentioned any particular kind. "So we may infer," the account continues, "that, had Ernestine Roussel compared her enemy to a blue pill, for instance, she would have been treated with more rigor."—*New York Medical Journal.*

Caius.—Dr. Caius (1510–1573) showed himself notably before his age in his censures of excess in eating and drinking, his commendation of the bath and of muscular exercise. His advice to his readers to have recourse to a good physician, and to be at least as good to their bodies as to their hose or their shoes, is followed by a picture of the army of quacks who in default of science preyed upon the masses. "Simple-women, carpenters, pewterers, braziers, soap-ball sellers, apothecaries, avaunters themselves to come from Pole, Constantinople, Italy, Almaine, Spain, France, Greece, Turkey, India, Egypt, or Jury; from the service of emperors, kings and queens, promising help of all diseases, yea incurable, with one or two drinks, by drinks of great and high prices, as though they were made of the sun, moon, or stars; by blessings and blowings, hypocritical prayings, and foolish smokings of shirts, smocks, and kerchiefs, with such others, their phantasies and mockeries, meaning nothing else but to abuse your light belief, and scorn you behind your backs, with their medicines (so filthy that I am ashamed to name them), for your single wit and simple belief, in trusting them most, which you know not at all and understand least; like to them which think far fowls have fair feathers, although they be never so evil favoured and foul; as though there could not be so cunning an Englishman as a foolish running stranger, or so perfect health by honest learning as by deceitful ignorance."—BETTANY'S *Eminent Doctors*.

The Early Formation of Character.—T. C. M., in *The Cincinnati Lancet and Clinic*, thus translates from the French:

"Within the deep interior of a womb,
A narrow and contracted dwelling-place,
Two embryos had found a living tomb,
Although their getting there was no disgrace.
The first of these head downward hung,
And to his brother's legs strong hugs would give;
While every day a merry song he sung—
'How happy 'tis a fœtal life to live!

"'Here in our jolly home is never care,
Plenty around us casts a generous store;
Oh, let us always be a merry pair;
How charming thus to live for evermore.
Come! swim upon the amniotic tide,
And each placental bumping e'en forgive:
What joy it is upon one's back to slide;
Oh, happy 'tis a fœtal life to live!'

"The second twin, head pointed to the sky,
Cast looks disdainful on the one below,
And answered with a mournful fœtal sigh—
'I like you; but you are a little slow.
You laugh, and frisk about like a weak child
Who in the simplest joy doth pleasure find:
By such a living I am not beguiled;
My life's unhappy, save among mankind.

"'Here in this uterine dungeon, dark, confined,
This gloomy prison cell so moist and close,
I knock my head until I'm nearly blind,
While your big feet are kicking 'gainst my nose.
If I perchance some gentle movement make,
You use my navel string for jumping rope.
Your company I'd really like to shake;
I long for death, it seems my only hope.'

"E'en as he spoke the watery sac gave way,
The womb was wrapped in labor's painful throes;
The under twin slipped into light of day,
A-squalling sadly, 'Now commence my woes.'
As for the one who hated uterine life,
He bawled a song of praise unto the Lord,
And smiled serenely as the old midwife
Put on a belly-band o'er his clipped cord."